Clinical Lectures ON CASES ILLUSTRATING RENAL SURGERY.

Delivered at University College Hospital,

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LECTURE II.

GENTLEMEN,—The next case is also that of a child, and illustrates in the first place the difficulty of diagnosis of certain renal affections, and in the next the freedom with which the kidney may be dealt with in exploratory operations without risk to the patient. I may remark here that this point was far less known when this case was operated upon, nearly three years ago, than it is now, for since then many similar exploratory operations have been performed and data have accumulated.

The points I wish particularly to emphasise may be summarised in the title which follows:—

CASE 2. *Complete History of Renal Calculus; Exploratory Lumbar Incision, with Palpation and Multiple Acupuncture of the Kidney; no Stone detected; Operation Wound healed in a few days, with no ill effects.*—A. G——, aged nine years, was admitted into University College Hospital, under my care, on Jan. 23rd, 1882. Previous to this he had been treated for renal calculus both at Ormond-street and at St. Peter's Hospitals. His illness appears to have dated back three years, when his parents first noticed that he had pain and difficulty in micturition. He was then circumcised at the Children's Hospital; but a little later the additional symptoms of pain in the right side and hæmaturia were noticed. He was then taken to St. Peter's Hospital for Stone, where he remained for about a month, during which period he was several times sounded for calculus in the bladder, with a negative result. The rest in bed, however, seemed to check the bleeding, but the pain in the loin was as bad as ever. After this I admitted him into hospital to observe his case, and here again the rest seemed to relieve him almost completely, and he left the hospital accordingly soon after. Again, however, he was readmitted on Jan. 23rd, 1882, all the symptoms having returned. They are noted as follows in the hospital register:—"Paroxysms of pain gradually increasing in intensity, and felt in the loin and tip of the penis. During the pain there is severe retching, but no actual vomiting. The urine is not always bloody after the attacks of pain, but is usually lighter at first, and then becomes darker and darker and thicker, resembling pure blood at times; micturition five to six times daily; no history of increased frequency at any time. The bowels are stated to be much relaxed after taking hot food. The boy has always been delicate, and suffered much from bronchitis as an infant; his father is also asthmatic and catarrhal, as also the other children of the family, but the mother is healthy."

On Jan. 31st I examined the flank with the hand carefully, as also the bladder and ureter through the rectum, the boy being under the influence of chloroform, but could find nothing abnormal anywhere. The urine passed immediately after this was very clear, but that voided the night succeeding was dark reddish-brown, containing red and white corpuscles and oxalate of lime crystals. The next day the boy seemed very well. On Feb. 3rd, too, it is noted that the urine just passed was more bloody than any seen yet. It was acid, of a specific gravity of 1025, and contained crystals as before. In other respects the general health was good, and there were none of the paroxysms of renal colic formerly complained of. Here, then, there appeared to be the completest evidence of renal calculus, hardly a symptom, as usually described, being absent. In the first place, there was pain in the right renal region of a very severe character, paroxysmal and running down to the tip of the penis, and followed by severe hæmaturia. The urine at the same time was acid, and contained crystals of oxalate of lime and red and white corpuscles. The fact of the kidney not being enlarged excluded new growth, as the symptoms dated back three years, and also appeared to negative tubercular disease of the same standing. Either of these diseases existing for three years would almost certainly have been accompanied by enlargement of the kidney. Then, after manual examination of the loin, there was an increase of hæmaturia the next day. There was not, however, any increased frequency of micturition at any time, so far as we could make out, and this was the only symptom of calculus absent.

It appeared therefore that, everything having been done by ourselves and at two other hospitals to mitigate the sufferings of the child without avail, the proper course to pursue was to cut down upon the kidney, explore it carefully, and if possible, remove the stone, if present, from it. With this object in view, I cut down upon the kidney on February 8th by an oblique incision running from above and behind the tip of the twelfth rib downwards and forwards. To gain room the tip of this rib was removed with bone forceps. I now passed my finger over both surfaces of the kidney, but found nothing abnormal. I then punctured the organ in all directions about twenty times with a long needle passed deeply, but with a like negative result. As I could not decide to remove a kidney in which nothing was to be discovered abnormal, I closed the wound. This was one of the first cases in which this mode of exploration was adopted in this hospital, and the effect of it was watched with much interest. There was very little difficulty in it. Only one muscular vessel required ligature and the punctures of the kidney hardly produced any bleeding. The palpation of the organ, which was small and highly placed behind the ribs, was the only matter of any trouble. In the exploration I used every antiseptic precaution except the spray, and after suturing the wound covered it with lint and carbolic oil and a pad of dry salicylic wool, a small drain-tube having been inserted in the lower angle.

The next day there was little to note except slight tenderness in the side and uneasiness. Temperature 99·8°; pulse 144 to 155. The following night the patient slept better, and was brighter the succeeding morning. Temperature 100·6°; later 101·3°; and at 6 P.M. 99·6°. He had passed sixteen ounces of urine in twenty-hour hours, with some pain at the tip of the penis, but far less than before. The urine passed at 6.30 last evening was light-coffee coloured, with thin ropy deposit and very acid; sp. gr. 1032. That passed at 1.30 A.M. was lighter still, and strongly acid; and that voided at 8 A.M. was still lighter, and had only a slight tinge of blood; sp. gr. 1034.

The wound was dressed for the first time on Feb. 10th, and was found quiet, with only a trace of odourless serum around the tube, which was removed; it was dressed as before. On the 13th there was a slight pain in the flank after a meal consisting of mutton chop and bread. At 2 P.M. he passed some very thick alkaline urine of deep reddish-brown colour, with deposit; sp. gr. 1032. By the 14th he had got over all the effects of the operation, and had been sitting up in bed for some days. There was very little pain in the side, but some after micturition. The urine about this time was only a little smoky, with red and white corpuscles in fair amount and oxalate of lime crystals. On the 17th he seemed quite well, but the urine remained as before, and there was still pain in the side. On the 21st I removed the wire sutures, as the wound had healed by first intention. On and after the 27th he was out of bed and running about, all pain, both in the side and penis, having disappeared, and except for paleness he looked very well. He went to Eastbourne on March 1st, having no pain anywhere. The urine at this time was 1025 and acid, with a slight trace of albumen, due no doubt to the presence of blood.

It is worthy of remark that from this time onward for a considerable period the patient was free from all lumbar or other pain, and only noticed a little blood in the urine. This has been noticed since in other cases. When he returned from the seaside he looked well and hearty, and remained so for some time. A few months later, however, he seemed to fall off in health, and with this there was a return of the old symptoms. He was then readmitted into the medical wards for observation, but nothing new was discovered. Rest, good diet, and tonics appeared, however, to benefit him, and the symptoms became less severe. Since his discharge I have not seen him.

In considering this case in the light of further experience I am inclined to think it possible that, although the symptoms appeared so typical, we may have had to deal here, not with a renal calculus, but with a small tubercular deposit, or ulcer, in the pelvis or ureter. I cannot help

thinking that the two conditions in their early stages may give rise to identical symptoms. In a later stage we know that they closely resemble each other in their manifestations. Of this I have had an excellent illustration quite recently in a case admitted into hospital in an almost dying state. The symptoms might either have been held to indicate renal calculus or tubercular pyelitis. On the death of the patient (a man aged about fifty), soon after I found well-marked tubercular disease of the right kidney, right ureter, right vesicula seminalis, and of the epididymis of both sides. The deposits were caseating, but not very much broken down. The left kidney was sound. Be this as it may, we learn from the foregoing history that even with the most complete history of renal calculus, and with all the assistance of our recently devised lumbar incisions and explorations, we may yet be baffled in detecting a stone in the kidney when we actually have the organ between our fingers. Either this, or there is some other condition beside the presence of a stone which can give rise to identical symptoms. On the other hand, a sufficient number of cases are now on record, where with such a history and exploration a stone has been found and removed, to justify a resort to such a proceeding even in doubtful cases. And this appears distinctly to be our duty when we consider how devoid of risk the measure is when employed with care and all antiseptic precautions. You will observe that this little boy, far from being in any way injured by the exploratory operation, was actually known to have been relieved of some of his most distressing symptoms for some months afterwards; and though we cannot definitely put this down to the credit of the operation, it is, at all events, satisfactory to observe the fact, especially as it has been noticed in several cases of the same exploration since undertaken.

CASE 3. *Pyonephrosis; Aspiration of thirty-six ounces of Pus; Relief; subsequent Re-accumulation, then Rupture of the Collection into the Sheath of the Psoas Muscle, with pointing in Scarpa's Triangle; Nephrotomy; Drainage of large quantity of Pus from the Kidney; Relief.*—This case is of a somewhat different kind, and illustrates points which are sufficiently indicated in the title affixed to it, to which I invite your attention. It is chiefly remarkable for the fact that a large pyonephrosis eventually made its way along the sheath of the psoas muscle, and so into Scarpa's triangle, taking, in fact, the same direction precisely as an ordinary psoas abscess from spine disease, a most unusual course for a renal abscess, which usually forms in the loin and points somewhere above the crest of the ilium. It is also noteworthy that whereas before the incision was made into the kidney only a slight trace of pus was found in the urine, some time after the operation the ureter became more pervious, and pus was passed freely by the urethra. During July, 1884, it escaped from the lumbar sinus and bladder alternately about every other day, ceasing almost completely to come one way when abundant the other. Another point is perhaps suggested here—namely, whether it is an advantage to the patient that the perviousness of the ureter should be re-established where there is a suppurating kidney. In this case the appearance of pus in the bladder in considerable amount some months after the nephrotomy, during which the patient's health was materially improved, was soon followed by the occurrence of pain in the kidney opposite to that first affected. This pain seemed for a time troublesome, and was accompanied by tenderness on palpation and other symptoms mentioned below, the patient's health at the same time appearing to fall off. All this suggested to me the possibility of the other kidney becoming secondarily affected from irritation in the bladder due to the pus passing that way, it being impossible to keep this pus perfectly sweet for months with an open sinus in the loin in a patient up and going about out of doors. The case also suggests a limit of operative interference for pyonephrosis, based upon evidence pointing, it is believed, to unsoundness of the opposite kidney, or, at all events, arousing grave suspicion as to its healthiness. The case is briefly as follows:—

A. F——, aged forty-eight, originally a shoemaker, now a porter, was admitted into University College Hospital, under the care of Dr. Roberts, on Jan. 21st, 1884. At this time he had a large lumbar swelling, with all the characteristics of an accumulation of fluid in the kidney, and which was diagnosed to be renal, on the same grounds generally as those given in Case 1. There was a history of an attack of inflammation of the kidneys two years before, which compelled the patient to keep his bed for eight weeks, during which time the urine was very thick; otherwise his general health, past and present, was noted as good. His viscera and all secretions except the urine were normal, the latter containing a slight cloud, which showed corpuscles, but only a trace of albumen and no sugar; its specific gravity was 1014, and the average percentage of urea for ten days only 1·6; the temperature was 99·4°. Soon after his admission Dr. Roberts kindly asked me to see the patient, and I had only to endorse the view that this was a renal swelling, and to suggest that it was a pyonephrosis; I therefore aspirated the collection from behind at the point mentioned in Case 1, and drew off thirty-six ounces of laudable inodorous pus on Feb. 6th. No calculus was felt by the needle. After this the man lay in bed for seventeen days, and during this time the sac did not refill. He seemed so much better that on Feb. 23rd he was allowed to go home, with directions to return from time to time for observation. A few weeks later it was clear that the sac was filling again, as was expected. By the middle of March I was surprised, however, to find that not only had the pyonephrosis returned, but that it had given way, and now stretched from the flank to Scarpa's triangle under Poupart's ligament, fluctuating the whole way. This offered a remarkable contrast to the previous condition, where the sac was sharply defined below, and indicated that the collection had most probably burst into the sheath of the psoas muscle.

As the patient was now beginning to suffer again I readmitted him on March 31st with the object of drawing off the pus by incision in the loin. Accordingly, the patient being under the influence of ether, on April 2nd I made an oblique incision three inches long midway between the last rib and the iliac crest downwards and forwards, through skin, muscles, and fascia. Reaching the sac I opened it with a firm thrust of my finger nail, and gave exit to twenty ounces of pus. This opening led directly into the pelvis of the kidney, and with the finger I and my colleague, Mr. Godlee, could feel the calyces of the organ. A probe passed inwards and downwards reached nearly to the groin, but nowhere was a stone to be found. As the drainage from the loin seemed sufficient, I did not think it necessary to make a counter-opening in Scarpa's triangle, but placed a large tube in the lumbar opening before partially stitching it together. Very little blood was lost during the operation, which was conducted under strict Listerian precautions. There was a moderate amount of shock on the same evening, the temperature falling to 96°, but on the following morning the patient is noted as being very comfortable. Pulse 80; temperature 99·6°. The wound was dressed on the 4th and looked well, the general condition being also good. On the 5th the patient was sick several times, complained of pain in the hypogastrium and around the umbilicus and did not look at all well, the temperature being 101°; his urine was almost black from carbolic acid and contained a little above the normal percentage of urea—namely, 2·8 on the whole amount. This, however, only equalled twenty-three ounces in twenty-four hours, making only about 310 grains of urea excreted in the same time. The patient, however, was below the average weight and size and, it must be remembered, was in bed on restricted diet. (His weight was 120 lb., and he ought to have been eliminating about 400 grains of urea.)

On the 7th all the above symptoms had disappeared, and the patient looked very well. The dressing was changed under the spray. On the 8th there was again carboluria, with a slight rise of temperature, but the other symptoms of carbolic intoxication were absent, and he passed forty-seven ounces of urine, with a specific gravity of 1020, and a percentage of 1·85 of urea, or about 407 grains in twenty-four hours. The condition of the wound from this date on requires no comment. It healed up to the drainage opening quickly, and the patient was soon able to get up and go about, wearing a Listerian dressing of gauze, &c. At the beginning of May he was sent to the convalescent home, still wearing an antiseptic dressing as before. After the operation the temperature was satisfactory throughout, except on April 4th and 5th, during the period of carbolic intoxication, when it rose to 101°, falling again with the disappearance of the symptoms. Again, on the 7th, after the second dressing, it rose to 100°, corresponding to the reappearance of the carboluria; after this it was only 99·4° once, but usually normal, until he left the hospital.

When the patient returned from Eastbourne a month later, at the beginning of July, he looked very well indeed, and continued so for a time, the fistula in the loin being still

open. Then, being out of work and not having an abundant diet, he seemed to lose strength again. At the beginning of August I readmitted him for observation and to see whether anything could be done to get rid of the sinus in the loin. I found, however, that there were but two courses open to us, only one of which could be regarded with favour—viz., either to encourage closure by rest and the free drainage of the part or to remove the kidney. The latter idea I abandoned at once, for the following reasons:—First, the patient seemed to have lost strength lately; again, his temperature had, after August 4th, regularly risen each evening two, or even three, degrees, to fall again, though not quite to normal, in the morning; there was nothing about the wound or abscess to account for this. He now also began to complain of a good deal of pain in the left flank, with some tenderness on palpation in the left renal region. This pain radiated down the left thigh and testicle, and was at times described as severe. There was now no pain or tenderness on the side operated on. At this time, too, he began to complain of scalding on micturition and to pass more pus than before, with acid urine, which contained besides a good deal of phosphates. The pus when coming from the sinus was diminished in the urine, and *vice versâ*. All this—together with the fact that the percentage of urea had originally been below normal before the operation, and was now, after all immediate effects of the latter had passed off, still below, being only 1·3 on an average of ten days—led me to suspect that the opposite kidney was also not sound. This surmise, of course, if accurate, contra-indicated nephrectomy. The patient left the hospital on Saturday, September 27th, and with none of the symptoms mentioned above very prominent; but for the weakness due to confinement to bed there would have been no reason for his not following his calling. For the last ten days of his stay in the hospital (September 14th to 24th) the amount of urine passed in twenty-four hours was very constant, the average being only 32·2 ounces; the specific gravity was steady each day at 1025; the percentage of urea was also perfectly constant, at 1·9 for every twenty-four hours—this gives an average of only 293·6 grains of urea for each of the ten days. The temperature was above normal, showing usually a slight rise each night. The morning average was 100·3°, the evening 100·4°, for the last ten days; but the difference between morning and evening was usually more than this average showed. (This diminished elimination of urea in spite of the presence of pyrexia is worth noting as part of the evidence, in all probability, of derangement of the excretory power of the left kidney.) The urine was still slightly turbid from the presence of pus, but when this subsided it showed no evidence of the presence of albumen. It was still foul to some extent, though acid again, having been until lately either neutral or alkaline. The fact that the patient suffered considerably from carbolic intoxication on very slight provocation is also worth noting, and, taken with other facts, lends support to the view that the left kidney was probably inadequate to any great extra strain thrown upon its eliminatory functions.[1]

We now turn to another case offering a different class of phenomena for consideration.

CASE 4. *Tubercular Kidney; Extreme Prostration; Exploratory Nephrotomy; Drainage; Considerable Improvement for some months; subsequently Amyloid Disease of Opposite Kidney and other Internal Organs, and Death from Asthenia five months later.*—Regarding the following case the conclusion is, I think, justified that the limit of operative interference was reached in dealing with it. To have gone further at the time the patient first came under surgical treatment would almost certainly have led to a fatal termination, whereas what was done may fairly be held to have improved the health, relieved suffering, and prolonged life.

The patient, A. P——, aged twenty-seven, was admitted into University College Hospital on May 12th, 1880, under the care of Dr. Bastian. Her history was that she had begun to lose health about six months before (Sept. 1879). She suffered then from weakness, great headache, occasional shivering, anorexia and diarrhœa, to such an extent as to be obliged to give up her employment as governess; she had been losing ground ever since. She described symptoms, noticed at the age of seventeen, extremely like those due to the passage of a renal calculus, and since then there has been frequently a "brick-red" sediment in the urine. The same symptoms were noticed last August, and at that time there had also been pain in the loins from the last rib to the nates, with thirst, diminished flow of urine, and abundance of "brick-red" sediment. Then at the end of September she noticed a lump in the right side of the abdomen rather larger than an egg, slightly tender on pressure. This remained about eight weeks, and then gradually went away. During its presence she had occasional sickness, increased frequency of micturition, with pyuria, and also diarrhœa. Since January no pus had been seen in the urine, and the tumour had quite disappeared. But in February her left thigh and leg became very much swollen, tender, and itching, and shortly after the right limb became similarly affected, with much loss of power besides. She was admitted into hospital on March 12th, 1880.

At this time she was very emaciated and anæmic, and her lower limbs were as described, the veins being marked out and hard besides. The nervous and respiratory systems showed nothing abnormal. The pulse was 128, regular in force and rhythm, and compressible. The abdominal organs appeared normal to palpation, except for a fulness in the right flank extending to the iliac fossa, where its margin was distinct. This tumour was not painful on pressure, and there was resonance over it in front. The urine was 1020, slightly alkaline at first, but acid later. It contained no albumen or sugar, but deposited a little mucus. There was still much headache. Her family history was good.

With rest in bed, care in diet, and other general treatment, some improvement took place in the patient's condition; at first she became less anæmic, the swelling in the legs became much better, and she felt stronger, the headache, however, being still distressing at times. The temperature rose nightly, often to between 103° and 104° with striking regularity, and was normal in the morning. On April 6th the patient had a rigor. On April 21st I was kindly asked to see her, and endorsed the view that the tumour in the right flank was renal, and probably contained pus and a stone. I therefore explored it with an aspiration needle through the loin in the usual way, and at a moderate depth struck a collection of the most fetid pus, of which I drew off an ounce and a half. On thrusting the needle a little deeper, nothing but pure blood came away, and no calculus was felt. No ill effects followed this exploration, and no pus or blood was seen in the urine. The condition remaining as before, I cut down upon the kidney from the loin a week later, on April 27th. On reaching it, an aspiration needle was thrust into the organ, and some pus again evacuated. Along this needle I passed a knife, and through the opening thus made my finger, which I thrust into the pelvis of the organ. Pretty free bleeding resulted for a few moments, but then ceased. No calculus was felt, and the pelvis of the kidney was found to be smooth wherever it was reached. The strictest Listerian precautions were observed. This operation produced considerable shock in the weak condition of the patient, from which, however, she recovered fairly rapidly. On the same evening the temperature rose as usual, and reached 103°. The next morning it had fallen to 95·2°, and only rose to 97·2° at 10 A.M.; from this on for twenty-four hours the average taken in the axilla and rectum every two to three hours was 95·5°, and it then only very slowly rose until in twenty-four hours more it had touched the normal again. After this it remained nearly normal for five days, and then rose as before in the evening, but not within two degrees of the usual evening temperature before the nephrotomy. Indeed, to the termination of the case the temperature was shown to be permanently modified for the better by the drainage of the suppurating kidney. All the subnormal temperatures were verified by repeated observations with different thermometers. The patient's general condition during the period of very low temperature seemed but little affected, but a few days later it appeared much improved. She was brighter and ate and drank with more relish and was soon able to sit up a little. On the whole the nephrotomy may be said to have produced marked benefit for a time. The urine throughout remained almost normal, only showing a trace of albumen; the legs became less œdematous and gained strength, and the patient could soon sit up. All this time the wound drained well but showed no tendency to close

[1] NOTE, Jan. 20th, 1885.—I saw this patient last week, and examined him. He says he is better, and feels no pain in either flank. The urine looks normal, and has been so for some time; it has no deposit. There is no tenderness in the renal region on either side on manipulation. There is still a very small sinus in the right loin, which secretes a drachm or two of pus in the day. The patient is thinner than when last seen, but this may be accounted for, perhaps, by his diet.

from below, and a probe still could be passed downwards and inwards towards the ureter for a distance of eight inches. On passing my finger into the wound its whole length nothing in the shape of a deposit or stone could be felt on any occasion.

In this case the question was several times debated whether the kidney ought to be removed; but to this measure I was strongly opposed on account of the weakness of the patient and the fact that the swelling in the lower limbs probably indicated some thrombosis of the larger systemic veins, due to causes not yet discovered, but still undoubtedly grave; besides this, there was slight albuminuria; and I am confident now that attempt to remove the kidney would have had a fatal result. The subsequent history of the case may be briefly summed up. In the early part of June the patient became listless and dull, taking but little interest in things around her and giving up reading; she also became irritable and careless about passing motions and urine in the bed; diarrhœa also became a prominent symptom. The superficial veins on the right side of the abdomen and groin became much dilated, those of the left slightly so. From June 30th albumen was found in the urine in steadily increasing quantity, only a trace having been present before. Later on (July 20th) casts, hyaline, granular, and epithelial, were found. On July 26th there was an attack of convulsions, ending in stupor. Two days later another fit, with increased stupor and weakness, was noticed, and again on the 29th. On the 30th there was some sharp bleeding from the sinus, and she died at 3 A.M.

The autopsy, made by Dr. Barlow during my absence from town, shows how well justified was the conclusion that removal of the kidney would have been an improper operation in this case as it presented itself to us. The brain was generally healthy, though the sulci were abnormally wide and the convolutions somewhat wasted. The heart showed small vegetations on the aortic, and some larger ones on the mitral, valves, otherwise nothing abnormal. The lungs and pleuræ were fairly healthy, showing no tubercles. The liver was healthy. The spleen was enlarged and markedly amyloid. The left kidney was much enlarged and notably amyloid, the cortex being fatty and increased in depth. The right kidney, which had been operated on, was firmly adherent to its surroundings, including the cæcum and ascending colon. It was hollowed out into several rough tuberculated spaces, into one of which the lumbar wound entered, and all its secreting substance seemed destroyed. The ureter was also rough and lumpy. This kidney contained some greenish pus, but no calculus. The renal vein was filled with a soft cheesy thrombus, which extended into the vena cava upwards nearly to the heart, and downwards for about three inches.

A sufficient explanation of the gravity of this case from the first is furnished by these notes without further comment.

ABSTRACT OF

Lettsomian Lectures

ON

DISORDERS OF DIGESTION,

THEIR CONSEQUENCES AND TREATMENT.

Delivered at the Medical Society of London on Monday, January 19th, 1885,

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LECTURE II.

BILIOUSNESS and indigestion are terms used so frequently together that we do not always sufficiently distinguish between them. Biliousness is, in all probability, of complex origin. The difficulty we have in ascertaining the exact causation of biliousness is no doubt largely due to the fact that disturbance of the liver affects the stomach and intestines, and *vice versâ*. The arrangement of the bloodvessels in the liver and alimentary canal accounts for the close connexion of these structures. Dr. Brunton has found, by a number of experiments on the artificial circulation of blood through the livers of rabbits, that the liver is highly elastic. When the bottle containing the blood was raised two or three feet above the liver, so as to increase the pressure under which the blood flowed through it, the organ expanded almost like a sponge, and again contracted when the pressure was diminished. In the experiments the rate of flow from the hepatic veins was very variable; the rate appeared to depend upon the quality of the blood. A vicious circle may be readily formed by the production of venous engorgement of the liver from the absorption of the products of imperfect digestion. Fasting and the use of medicines may break this vicious circle. Dr. Beaumont's observations on Alexis St. Martin proved the close connexion between the tongue and stomach. Stimulation of the gastric mucous membrane by gentle rubbing with a glass rod or feather may cause the same changes in the stomach as the ingestion of food. Pallor and secretion of mucus are caused by strong irritation, and stronger irritation still causes nausea and vomiting. These experiments throw light on the condition known as biliousness. The varying states of the appetite may be explained. Dr. Beaumont observed once in Alexis St. Martin that the tongue had a thin whitish fur when the appetite was craving, the stomach showed several red spots and patches abraded of the mucous coat, tender and irritable; the gastric digestion was prolonged to seven hours. Here there was indigestion. Two days later the usual appetite was gone, the tongue was thinly coated of a yellowish tint, the face was sallow, and the stomach showed several deep-red patches. Mucus and bile were present in the stomach, and coated a muslin bag. The sallowness showed that the condition was one of biliousness, and that the liver was involved. On the succeeding days the venous congestion of the stomach was increased. Persons who suffer from malaria may suffer from disturbance first in the liver and next in the stomach, the opposite to that just described. Malarial poison, whether it be a bacillus or not, appears to have a particular power to affect the liver, spleen, and vaso-motor centres. The usual symptoms of indigestion are flatulence, weight in the epigastrium, acidity, and pain; and it may be worth while to try to ascertain the conditions to which each of these symptoms is due. Analysis of gastric gas shows that it chiefly consists of the gases of the atmosphere from which the oxygen has been absorbed. The gastro-intestinal mucous membrane may secrete gas in large quantities. Malarial patients may suffer from a tendency to flatulence without any other symptom; this being probably due to obstruction of the portal circulation of the liver. Flatulence may be associated with cardiac distress, as in running to catch a train, and as occurs in patients with cardiac disease, as the term "heart-wind" of Dr. Mitchell Bruce indicates. Decomposition of food may give rise to the formation of gas. Gas may pass from the intestines into the stomach. Excessive swallowing of air is regarded by Dr. Brunton as the most frequent cause of gastric flatulence. Tenacious fluids like pea soup carry down a good deal of air. The conditions which give rise to frequent swallowing of air are:—(1) Continued salivation; (2) a sense of irritation at the back of the throat; (3) a feeling of acidity in the stomach; and (4) a feeling of oppression about the epigastrium. Irritation of the vagus, as Czermak showed, is the cause of the feeling of constriction across the chest like a huge iron band clutching it, known to the Germans as "beklemmung." Depressing emotions probably act on the vagus nerve centre. Frequent swallowing may overcome the feeling of constriction, since Kronecker showed that swallowing does away with the vagus cardiac inhibition; the popular phrase "swallowed his grief" is related to this. The observations of Ebstein and Zeckendorf[1] seem to show that hysterical distension of the intestines is due to paralysis of the pylorus. An analysis by Kolbe and Ruge of the gases passed per anum by a man after different kinds of food appears to show that it is the production of marsh gas, which chiefly gives rise to the flatulence of the intestines. Marsh gas may be passed in eructations. Ewald[2] had a curious case under his care, in which the patient was astounded to find, on trying to light a cigar, that inflammable gas was issuing from the mouth. Persistent eructations of sulphuretted hydrogen point to serious organic disease.

Acidity and flatulence may alternate in the same individual. The feeling of acidity is not always due to the acid, but

[1] Pathogenese der Bauchtympanie Inaug. Diss. Göttingen. 1883.
[2] C. Anton Ewald, Reichert, Du Bois-Reymond's Archiv, 1874, p. 917.

to an increased sensitiveness of the stomach or œsophagus, or to some abnormal condition of the cardiac orifice. Swallowing a piece of hot potato proves that the œsophagus is more sensitive than the stomach.

Dr. McNaught has shown[3] that in irritative dyspepsia the acidity was not above the normal, and Professor Talma[4] of Utrecht has proved the same thing by giving to patients who suffer from acidity an artificial gastric juice containing only the normal proportion of hydrochloric acid, and yet they suffered from the feeling of acidity. Increased formation of acid by the decomposition of food may cause the feeling of acidity.

The pain of heartburn seems to be due to irritation of the cardia and of the œsophagus, seeing that the pain of the stomach is rather a feeling of weight than of pain. An escape of wind may give relief. It may be that the wind stretches the cardia and so allows the acid contents to come in contact with that structure. Colic may rarely be due to violent spasm of the stomach. Alkaloids absorbed from the rectum into the general circulation produce greater effects, as Mr. Savory showed for strychnia, than when absorbed higher up, probably because the liver has the power of excreting these bodies.

Retarded hepatic circulation, by preventing the too rapid absorption of the peptones, may prove of service to the organism. In his article on diabetes in Reynolds's System of Medicine, Dr. Brunton has insisted on the difference between glycosuria and true diabetés. Lehmann[5] found that sugar injected into the mesenteric veins of a rabbit during digestion does not appear in the urine, although the same quantity injected in the same way in a fasting animal would produce glycosuria.

In some statistics of life insurance drawn up in New York[6] one out of every eleven healthy persons was found to present traces of albumen in the urine. Some experiments by Leube[7] on 119 soldiers showed that in 4 per cent. the morning urine contained albumen, and albuminuria occurred in no less than 16 per cent. after a severe march. Parkes[8] found about 10 per cent. of temporary albuminuria in hospital patients. Dr. Warburton Begbie writes: "It is surely a satisfactory consideration that a condition of excessive albuminuria—the urine becoming nearly solid by heat and nitric acid—may, after all, not indicate the coexistence of any structural change in the kidney." The albuminous substances in the blood appear to consist of such large molecules that they will not diffuse through the healthy glomeruli, but the products of digestion, peptones, and hemi-albumose will diffuse through the glomeruli. The white of egg appears to have a smaller molecule than serum albumen. Dr. Brunton swallowed six eggs in rapid succession, with the result that no albuminuria followed, though a violent headache, with sickness, were produced. Dr. D'Arcy Power, however, succeeded in taking a sufficient number of eggs to cause albuminuria. In this case the digestion was unable to deal with all the egg albumen ingested. The different kinds of albumen may be distinguished by noting the temperature required to cause coagulation. Stokvis proved that hemi-albumose injected under the skin may pass out of the kidneys without producing any injury to these organs, but if the injections be frequently repeated organic disease may be set up. Oxaluria, like albuminuria, may be transient.

According to Esbach, cabbage is singularly free from oxalate of lime, and oxaluria, caused by its ingestion, must be due to some other cause than simple excretion. Esbach[10] points out that if a reducing agent, like sulphuretted hydrogen, be added to a strong solution of urates, crystals of oxalate of lime are at once produced.

Shortness of breath may be due to dyspepsia; this may be mechanical from distension, or it may be due to disturbance of the circulation. Actual asthmatic attacks may occur in relation with disturbed digestion.

The "stomach cough" was next considered. Stomach irritation may supplement irritation of the pharynx, and the combined irritation be sufficient to excite reflex coughing. The pharynx is the place where the respiratory and digestive tracts cross one another, and irritation here may excite coughing and vomiting; this site, too, is readily affected by digestive disorders. Faintness, shortness of breath, and intermittent pulse are signs due to disturbance of the heart from indigestion, produced either mechanically or through the nervous system. Alkaloids may be formed in the intestine and absorbed there, acting like digitalis on the heart. Alkaloids, acting like muscarine, are formed from the decomposition of albuminis outside the body. The microbe of cholera may act by producing alkaloids.[11] What is the cause of sudden death in some gouty patients? It is possible that the contracted kidneys may be unable to excrete a cardiac poison assumed to be formed by disordered digestion in such cases. Some symptoms of indigestion—languor and disability to move—resemble poisoning by curare, and these symptoms may be due to the production of an alkaloid in the intestines.[12] The researches of Ludwig and Schmidt-Mulheim render it probable that peptones are the poisonous agents in such cases. Bocci[13] has found that, from human urine, an alkaloid can be extracted which has exactly the same action as curare. This alkaloid has not been shown to be the same as that obtained by Brieger[14] from the peptones formed by the digestion of fibrin with gastric juice, to which he has given the name of peptotoxin. Bile is not always bitter, though organic alkaloids may be. The absence of bitterness from freshly secreted bile has been observed by Dr. Brunton and Mr. W. E. Green of Sandown; by the latter in a case of biliary fistula. It is conjectured that the bitterness of gall is dependent on admixture with alkaloids. Bence Jones and Dupré have shown that the liver and some other animal organs yield an alkaloid resembling quinine in many of its actions.

The Greeks showed their wisdom by locating hypochrondriasis under the ribs and when they made use of the term melancholia. In the "Histoire de ma Vie," George Sand says, "Whether it is the bile which has made me melancholy or the melancholy which has made me bilious—this would resolve a great metaphysical and physiological problem which I will not take up—it is certain that sharp pains in the liver produce symptoms in all those who are subject to them of profound sadness and a wish to die. Since my disease first appeared I have had happy years, and when it seized me again, although I was in the condition most favourable to love of life, I felt myself suddenly seized by a desire for eternal repose." Sydney Smith describes in a very humorous way the connexion between low spirits and dyspepsia.[15] People are fully alive to the liability of poisoning from sewer gas, but they do not perhaps sufficiently bear in mind the danger they are in from the putrefactive products formed in the inside of the body. Senator[16] described a most instructive case in which the patient became collapsed and nearly died with all the symptoms of poisoning by sulphuretted hydrogen generated in his own intestines. Dr. Golding Bird[17] has described a particular class of nervous symptoms in which hypochondriasis and depression of spirits are accompanied by a deposit of oxalate of lime in the urine. Dr. Roberts[18] says, "these symptoms may be present in typical completeness without oxaluria, and conversely, oxaluria may exist in the highest intensity, and even go on to the formation of a mulberry calculus, without causing any of the above-mentioned symptoms." Murchison and Garrod have treated of the irritability due to poisonous substances in the blood.

Headaches are usually due to decayed teeth or irregularity in the eyes; when from the latter the pain is usually occipital or frontal, but it may be temporal. In headache from indigestion the upper surface of the eyeball will be found excessively tender, and the tension in the globe appears to be increased. As the subjects of such headaches grow older the headaches tend to be replaced by giddiness, and this change occurs about the period when the eyes are becoming hypermetropic.

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[3] Medical Chronicle, Jan., 1885.
[4] Zeitsch. fur Klin. Med., Bd. viii., p. 414.
[5] Akadem. Proefschr., Amsterdam, 1873.
[6] Medical Investigations, United States Life Assurance Company, 261, Broadway, New York.
[7] Galkowskiel, Leube, Lehre vom Harn, p. 369.
[8] On Urine, p. 178.
[9] Albuminuria in cases of Bronchocele and Exophthalmos, Edin. Med. Journal, April, 1874, and Works, Syd. Soc. Ed., p. 255.
[10] Journal des Connaissances Méd., 1883, p. 155.

[11] Vide Researches relating to the Pathology and Treatment of Cholera by Lauder Brunton and Pye-Smith, Practitioner, Nov. 1884, et seq.
[12] Lauder Brunton on Indigestion as a Cause of Nervous Depression, Practitioner, Oct. and Nov., 1880.
[13] Archives des Sciences Médicales, vol. vi., No. 22, 1883.
[14] Berich. d. Deut. Chem. Gesellsch., xvi., pp. 1184 and 1406; 1883.
[15] A Memoir of the Rev. Sydney Smith, by Lady Holland, vol. i., p. 195, London, 1855.
[16] Berlin. Klin. Wochensch. 1868. No. 24.
[17] Urinary Deposits. Fifth edition, p. 251.
[18] Urinary and Renal Diseases. Third edition, p. 79.

REMARKS ON THE

CIRCULATION OF THE BLOOD.

HISTORICAL NOTICE OF THE DISCOVERY THAT THE VEINS OF THE BAT'S WING, WHICH ARE FURNISHED WITH VALVES, ARE ENDOWED WITH HEART-LIKE RHYTHMICAL CONTRACTILITY, WHEREBY THE BLOOD IS ASSISTED ONWARD IN ITS COURSE TO THE HEART: A PROTEST AGAINST EFFORTS MADE TO IGNORE A CRUCIAL FACT IN NATURE.

BY T. WHARTON JONES, F.R.C.S., F.R.S., &c.

(*Concluded from p. 100.*)

IT would appear that the teaching in respect to the extreme circulation in the bat's wing at King's College has been as imperfect as at University College. At King's College this seems to have been owing to photophobia preventing observation, but at University College there seems to have been, in addition to the spasmodic closure of the eyelids preventing observation, some degree of deafness interfering with the correct acquirement of any knowledge of the subject by word of mouth. If the invalids thus affected had consulted me I would have done my best to relieve them. None, however, came, though I am confident I could have worked a miraculous cure, to the benefit not only of themselves, but also of the students of the respective Colleges. I may, therefore, say of the said invalids, "O! fortunati nimium! sua si bona nórint!" Leaving King's College, with its photophobia, I come to address myself to University College. In the "Manual of Physiology" of Dr. Michael Foster, formerly a pupil of University College, now Physiological Secretary of the Royal Society, and Professor of Physiology in the University of Cambridge, of late much in the hands of medical students, and pronounced by the last Harveian orator as being in his estimation the best of its kind, is to be found the following passage (page 155, second edition), where, speaking of alleged rhythmical variations in the "calibre of arteries," he says: "They may be compared with the rhythmic movements of the veins in the bat's wing and of the caudal vein of the eel." This utterance is quite meaningless. If the author had ever observed the objects in nature to which he refers in this manner, he would have ascertained at a glance that, though variations in the calibre of the artery of the rabbit's ear[1] may be seen at frequent intervals (constriction with exclusion of blood and regurgitation, alternating with enlargement by distension with blood, the constriction caused by the action of the tonically contractile muscular fibres of the wall of the artery, while the enlargement by distension with blood is permitted by the relaxation of these same muscular fibres), such alterations are not rhythmical. Again, he would have ascertained at a glance that there are no rhythmical movements of the caudal vein of the eel, either in the form of rhythmical contractions or in that of rhythmical pulsations, though there is a caudal lymph heart, which by its rhythmical contractions propels the lymph into one of the two veins which unite to form the caudal trunk, but that there is no pulsation by rhythmical distension of the vein thereby produced, nor could be under the physical circumstances of the case.[2] And then, again, he would have seen in the bat's wing spread out under the microscope, if he had examined it, phenomena which he would never have described as "rhythmic movements"[3] merely of the veins, without any notice of the course of the blood, as it is thereby influenced. It is, moreover, quite evident that Professor Michael Foster could never even have read in the Philosophical Transactions my paper on the Rhythmical Contractility of the Veins of the Bat's Wing, nor that on the Caudal Heart of the Eel.

Probably what Professor Michael Foster says in the passage above quoted may have been inspired by a jotting in his note book, made when a student attending the lectures of the late Dr. Sharpey, Professor of Physiology in University College and some time Physiological Secretary of the Royal Society. My reason for this conjecture is that Dr. Sharpey's knowledge of the subject in question appears not to have been derived from observation any more than that of Professor Foster. In an edition of Quain's Anatomy, at one time in use among the students of University College, the histological part of which was written by Dr. Sharpey,[4] it is stated that the rhythmically contractile muscular fibres of the walls of the veins in the bat's wing are similar in their microscopical characters to those of ordinary veins, a statement which is directly opposed to the fact.

In my paper in the Philosophical Transactions particular pains are taken to describe, both verbally[5] and pictorially, the peculiar microscopical characters of the rhythmically contractile muscular fibres in question. And by way of contrast I insisted on the fact that the muscular fibres of the walls of the veins of the ear of the long-eared bat which, as above mentioned, are unendowed with rhythmical contractility, do indeed present microscopical characters similar to those of ordinary veins. All this I had long before mentioned to Dr. Sharpey in conversation. Nevertheless, at a meeting of the Royal Society, about fifteen years after the publication of my discovery, having occasion to refer to the microscopical characters of the muscular fibres of the walls of the veins in the bat's wing, I asked Dr. Sharpey, sitting in his chair of office, what grounds he had for stating in a Student's Manual of Anatomy that the microscopical characters of the rhythmically contractile muscular fibres of the walls of the veins in the bat's wing are similar to those of the walls of ordinary veins. To this Dr. Sharpey replied, in a very confident tone, that I had told him so. Whereupon I rejoined that I never told him any such thing. From this it is evident that Dr. Sharpey had not only never examined the objects in nature, and had never read my paper, or even the abstract of it—nay, had failed to hear what I had told him by word of mouth; and yet, *incredibile dictu*, he had for years taught in his lectures what is contrary to the fact in nature, besides recording the same in print.

The business which the founders of the Royal Society proposed to themselves was, among other philosophical inquiries, to discourse of the circulation of the blood, the valves in the veins, the venæ lacteæ, and the lymphatic vessels. Considering that this was the programme of the Royal Society's work two centuries ago, the discovery of the rhythmical actions of the veins of the bat's wing with their valves would then have been hailed with observance, and would have found in Mr. Hooke, the "experimenter," a more intelligent and ingenuous exponent than Dr. Sharpey and his pupil, Dr. Foster, or Dr. Burdon Sanderson, his successor at University College, have proved themselves; while as "curator" Mr. Hooke would have taken better care of the drawings than Mr. Bell did.

Dr. Schiff, the well-known German physiological experimentalist, who at one time carried on his researches in Florence, in a transcendental frame of mind, apparently, interpreted the intermittent constrictions, which the artery of the rabbit's ear may be seen to undergo, as a provision for promoting the onward course of the blood, analogous to that which is found in the systole or rhythmical constrictions of the veins of the bat's wing. The fact, however, is that the effect of the constrictions of the artery is directly the reverse of this. By the constriction of the artery there is produced not only an arrest of the flow of blood, but an actual reflux, the consequence of which is that the ear becomes for the time exsanguine and cold. When, however, relaxation of the muscular wall of the artery supervenes, the flow of blood then takes place freely, the calibre of the vessel being dilated by distension, and the ear becomes again red and warm, as in blushing. All this is so obvious that one is amazed at the blunder. Dr. Schiff, however, did not fail to find proselytes. Dr. Virchow, for example, misled apparently by the current erroneous doctrine that constriction of small arteries sends the blood onward into the capillaries instead of back towards the heart, gave in his adhesion to the opinion.

Some years ago, in a clinical lecture at University College

[1] These must be the variations Dr. Foster refers to. He could surely not mean the less frequent variations in the calibre of other arteries, much less the distensions of arteries constituting the pulse.

[2] This will be shown in another communication.

[3] Here it is to be remarked that no pulsations are caused by the rhythmical contractions of the veins. This, it is obvious, depends on the increasing width of these vessels.

[4] In a subsequent edition by Professor Schaefer I have not found the veins of the bat's wing mentioned at all. A unique kind of muscular fibre not mentioned in a student's manual of histology! This omission is, however, less objectionable than a statement directly opposed to fact.

[5] Verbally also in the abstract above quoted from the Proceedings of the Royal Society.

Hospital, I challenged Professor Virchow to re-examine the point and retract his mistake. I am not aware, however, that he has done so. It is amusing to contemplate how people shut their eyes to nature's work, pretending at the same time that they see things which do not exist—a line of conduct which King Lear sarcastically recommends, thus:

"Get thee glass eyes,
And, like a scurvy politician, seem
To see the things thou dost not."

And all this passes under the name of "experimental research." But it is still more amusing to see how one blunderer improves on the mistake of another. Thus, a former editor of Kirkes' Manual of Physiology, having heard of Schiff's *discovery*, but not taking the trouble to read Schiff's account of it, much less to look on the original, tells his student readers that Schiff had discovered rhythmical contractions of the vein of the rabbit's ear, whereby the flow of blood therein was expedited as in the bat's wing. I called the attention of Mr. Morrant Baker, the present editor of the book, to the blunder, whereupon he struck it out and substituted a true account of what is seen in nature. I here call upon the authors and editors of the text-books on Physiology which I have been criticising to follow the example of Mr. Morrant Baker, and would recommend students to require a demonstration of the real facts in nature instead of the loose assertions made in lectures. They will thereby be saved from the strain and perplexity of mind they undergo in trying to understand what is unintelligible. May I also ask examiners to contribute their assistance in the matter, by inquiring of the candidates whether they have had demonstrated to them such and such facts in nature before asking any questions thereon. On the other hand, it might be suggested to examiners not to propose questions on a subject with the facts of which they have not made themselves acquainted by observations of their own.

To conclude. "Hear now this, O foolish people and without understanding; which have eyes and see not; which have ears and hear not. The prophets prophesy falsely and the priests bear rule by their means; and my people love to have it so."

Ventnor, Isle of Wight.

ANEURYSM OF THE UPPER THIRD OF THE BRACHIAL ARTERY.

LIGATURE OF AXILLARY; HÆMORRHAGE; AMPUTATION AT SHOULDER.

By GEORGE BUCHANAN,

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SPONTANEOUS aneurysm of the upper part of the brachial artery is very rare. I have consulted the most recent contributions to the subject, and can find only three cases recorded. The most complete and concise account is to be found in the American *Journal of Medical Science* for 1882, in an article by Dr. L. Emmet Holt of New York, to which I refer the reader for details. One case of his own in 1881 was cured by an ingenious instrumental compression. A second case is quoted from the *Buffalo Medical Journal* for 1870, reported by Dr. Kibler, in which the axillary artery was tied in its lower third. Hæmorrhage occurred on the eighth day; the axillary artery was tied higher up, and the patient recovered. The third case was reported by Scarpa in 1809. No operation was attempted, and the patient died of hæmorrhage. A few other cases are recorded, in which the aneurysm was situated at the middle or lower third; for these I refer to the paper above-named and to the recent works on surgery. Cases of traumatic aneurysm have been reported of every part of the brachial artery, in some of which the axillary artery has been tied, but the present paper refers only to spontaneous aneurysm. It is curious that, except Scarpa's case in 1809, no case should be reported till 1870, and the two recorded since have been in America.

The following is a report of what appears to be the fourth case of aneurysm at the upper part of the artery:—

Francis A——, aged thirty-one, a labourer, was admitted on Dec. 3rd, 1884, to the medical wards of the Western Infirmary, under Professor McCall Anderson's care, complaining of numbness and loss of power in the right arm. He stated that about four months ago, without any assignable cause, he felt this sensation for the first time, and that it came on suddenly and continued and increased. About three months ago he found a swelling on his arm beside his armpit, and felt that it was beating, but he had no pain in the spot. On admission he was found to have partial loss of sensation and motion in the right hand and forearm and a continuance of the tingling. The right hand was soft and clammy, and the temperature 94°; while the left was 95·6°. The right radial pulse was almost imperceptible, but that on the left side was full and bounding, as, indeed, was that of every other artery accessible to the finger. The apex beat of the heart was displaced downwards and to the left side. There was a diastolic murmur over the aortic cartilage and a systolic murmur over the aorta. He had a cough and spit, and complained of shortness of breath, and had night-sweats. He admitted that he was habitually intemperate. Dr. Anderson's opinion was that he had a much enlarged heart with aortic disease and some general deterioration of the system owing to his habits of life. The aneurysm being discovered, he was transferred to my surgical wards on Dec. 15th.

The aneurysm was about the size and shape of a hen's egg; the upper end came close up to the axilla and felt very soft, just as if it would give way on the slightest manipulation, but it could be lifted off from the artery, which could be felt beating distinctly in its normal situation just where the axillary ends. When pressure was made with the finger on the third part of the axillary artery pulsation in the tumour completely stopped, but the patient complained bitterly of the pain of the pressure even for a few seconds. The third part of the subclavian could be pressed against the first rib with ease, but the pain was even more severe.

It was quite obvious that there were only two courses open to me, amputation at the shoulder or ligature of the axillary, and I determined to adopt the latter, if there seemed any reasonable hope of success. The two dangers to be feared in ligature of the axillary, even when successfully accomplished without any complications, are gangrene from want of sufficient collateral circulation and hæmorrhage. I was perfectly aware of the anatomical disadvantage of the axillary artery, but I judged that the imperceptibility of the radial pulse proved that the blood was reaching the hand and forearm by some channels which had become established during the existence of the aneurysm. With regard to hæmorrhage, it is true that the vicinity of the great branches of the axillary artery would cause a current which would militate against the formation of a clot above the ligature, and so favour the occurrence of secondary hæmorrhage. But catgut ligature applied with antiseptic precautions acts in a very different way from the ordinary silk ligature, and I hoped, by disturbing the parts as little as possible, to apply a catgut ligature in such a way as to secure consolidation of the wound and included ligature by first intention. If the patient should take chloroform well, if the operation were performed rapidly, and if union by first intention should occur, but little shock would be given to a patient very unable to bear it. On the other hand, amputation at the shoulder-joint in a man enfeebled by excess was a most unpromising alternative.

Accordingly, on Dec. 19th, I ligatured the axillary artery. The patient was put under the influence of chloroform with very great care and anxiety, owing to the known disease of the heart. No inconvenience arose, although he took a large quantity. The arm was stretched out at an obtuse angle to the trunk, and the skin of the axilla thus put on the stretch. The pulsation of the axillary artery could be felt from the upper end of the aneurysm to where it was covered by the anterior fold of the axilla, a space of about two inches. I made an incision about three inches long obliquely across the course of the vessel, and along the lower border of the pectoralis major muscle. After dividing the subcutaneous tissue at the distal end of the wound, I felt the vessel beating directly under the deep fascia, with the median nerve superficial to it. A slight division of this fascia enabled me to put a blunt hook under the nerve, by which it was held aside. A few touches of a director disclosed the artery, the great vein having slipped down out of danger whenever the fascia was divided. Without exposing more of the arterial wall than to allow the introduction of the aneurysm needle, this was passed round and a strong chromic catgut ligature drawn through. It was tied firmly but not too tightly, and the arterial wall proved to be quite elastic and apparently strong. The operation was bloodless, and the wound was

rendered aseptic by the application of carbolic acid solution. The sides were drawn together with four thin silver wire sutures, and carbolised gauze dressing applied. Pulsation was found to be completely arrested in the aneurysm. Cotton-wool was wound round the limb, and the patient was placed in bed with the arm supported on a pillow.—8 P.M.: The patient complains of heat. Temperature 101°; hand and arm quite warm. One-sixth of a grain of morphia given subcutaneously.

Dec. 20th.—9 A.M.: Patient had some sleep, feeling fairly well, but hot. Temperature 99°. No sickness or pain; hand and arm quite warm. I changed the dressing; edges of the wound apparently cohering; no discharge. 8 P.M.: Feels very warm; temperature 103°. Subcutaneous injection of morphia.

21st.—Was restless first part of the night, but after a draught of thirty grains of bromide of potassium quieted and had a good night's rest. Temperature 100°.

22nd.—The patient feels so well that he asked to be allowed to sit up in bed to dinner, but was enjoined the most absolute quiet and rest. I dressed the wound again. To all appearance it was united, with no discharge, but I did not disturb it to ascertain if it were consolidated at the bottom. The aneurysm was much reduced in size, and felt quite solid. Temperature of hand and arm good. At noon the man felt a sudden sensation of pain and called the nurse, who found the bandages soaked with blood. Dr. Somerville, my house-surgeon, was at hand and took off the dressing. He found the wound bulged with clot, but no active bleeding. He obtained the assistance of Mr. Maylard, one of the dispensary staff, who grasped the arm over the wound ready to compress if the flow should recommence. Meanwhile Dr. Somerville telegraphed for me, and by 1 o'clock I arrived at the hospital. The man had been put partially under the influence of chloroform to allow of the pressure on the axilla without pain, and in this state I had him removed to the theatre. On opening the wound and turning over the clots which filled it I found that the blood came with great force from a small opening a short way above the ligature, which was felt by the forefinger to be firmly tied and still grasping the artery. The vessel did not seem to have given way at the ligature, but a short way above it, so that when I pushed the point of my forefinger against the bleeding spot I could easily arrest the flow, and had a small part of the vessel under my finger above the ligature. Keeping my left forefinger on the bleeding spot, with my right hand I split the fascia with a director about an inch further up than at the first operation. The median nerve and musculo-spiral were lying close together on the surface of the artery, but with two blunt hooks they could be easily held apart, and the trunk of the vessel brought into view. The aneurysm needle was passed and a catgut ligature brought round the vessel. This was tied by Mr. Maylard, but was just over the aperture in the artery and failed to check the hæmorrhage. The proceedings were repeated, and this time the ligature was firmly placed half an inch above the bleeding point, and effectually arrested the bleeding. To prevent all risk of hæmorrhage from the lower end of the vessel, I applied, with ease, another catgut ligature between the sac and my first ligature. Antiseptic dressing was then applied as before, and the patient was removed to bed, and ordered to lie absolutely quiet. My house-surgeon watched himself by the bedside till 4 P.M., and thereafter he was watched continuously by my clinical students, who kindly volunteered to take that duty in rotation. At night he was feverish and restless. A quarter of a grain of morphia was given subcutaneously.

23rd.—Passed a good night, and is very easy this morning. Partakes freely of iced milk. In the evening, again, a hypodermic injection of morphia was given.

24th.—Again a good night. Looks much calmer and easier this morning. Dressings not changed. At 1 P.M., when two students were on duty, they noticed blood on the dressings. My house-surgeon was on the spot at once, and, removing the dressing and opening the wound, he placed his thumb on the bleeding vessels and arrested the hæmorrhage. Dr. Beatson, one of the dispensary staff, was sent for, and without delay he took charge of the vessel while the man was put under chloroform. As a further precaution, a door-key, the ring of which was padded with lint, was put over the subclavian. I was summoned by telegraph, and, fortunately, happened to be at home at the time, so that I arrived within twenty minutes of the occurrence. The patient was removed in his bed to the theatre without loss of blood and still under the influence of chloroform. I amputated at the shoulder-joint, making a large semilunar flap above, and completed the operation with very little loss of blood. In two hours after the patient had rallied so as to be able to tell us he was feeling easier, and later on he drank a cup of tea. He slept a good deal during the night, but was restless and feverish from 5 A.M.

26th.—At 9 A.M. he was better, but was very feeble; it was obvious he would not completely rally from the shock of the two hæmorrhages and the amputation. He continued in the same state during the day, but became weaker in the evening, and died at 8 A.M. on the 27th.

Anatomical examination of the arm.—I am indebted to Dr. Bruce Young, anatomical demonstrator in the University, for a careful dissection of the extremity after its removal. It was quite obvious that the capillary circulation was perfect, with no tendency whatever to gangrene. The vessels were injected with great care from the radial artery; but even though gentle pressure was used, the coats gave way in the middle of its course, and the wax became extravasated, but about the elbow the vessels were well filled. The aneurysmal sac was full of dark clot, very firm, and no doubt in process of complete fibrination. The aneurysm was in the upper third of the artery, just about where the superior profunda is given off, that vessel being found injected adjoining the sac. The whole of the arteries entering the biceps and coraco-brachialis muscles were abnormally large, and one unusual branch, the size of a crowquill, pierced the coraco-brachialis and could be traced running up evidently into the deltoid, where it would inosculate with the anterior circumflex. The whole of the superficial arterioles were unusually enlarged; still it seemed to me strange that when the artery was tied above the superior profunda the blood should pass by these small channels so readily as to secure the limb against even temporary coldness.

Post-mortem examination of the stump.—In the amputation the knife had divided the upper end of the aneurysm, and the aperture of entrance of the artery into the sac was clearly seen. It seemed to have been a fusiform aneurysm, one side of which had become distended into the ovoid shape it subsequently assumed. At the seat of ligature the parts had been matted together, and the relations of the vessels and nerves much altered by the application of the thread ligatures to numerous points at the time of the amputation. The artery from the innominate to the axillary was dissected out from the surrounding parts. It was soft and apparently in the first stage of fatty degeneration, but quite tough enough to bear considerable pulling about. The last ligature which I had applied to the trunk of the vessel on the 22nd was found firmly tied in its place, compressing the sides together, and no appearance of giving way of the coats was to be found. The part of the artery from which the hæmorrhage had occurred on the 22nd had been destroyed in the manipulations necessary to ligature the main vessels at their amputation.

The heart was found to be nearly twice its normal size, the aortic orifice greatly encroached upon by numerous and tough vegetations. The lungs were œdematous. The other organs presented no special features.

Glasgow.

ON FUNCTIONAL AND FALSE MURMURS.

BY J. KINGSTON FOWLER, M.A., M.D.,

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(*Concluded from p. 102.*)

5. *Changes in the Pericardium.*—It is quite unnecessary to give the ordinary rules for distinguishing a pericardial friction sound from a valvular murmur. I may, however, point out that these morbid sounds are most frequently heard at one particular spot—viz., the sixth left interspace and over the seventh rib close to the base of the ensiform cartilage. Here the right ventricle is in contact with the chest wall, and it is on its anterior surface that the "white patch" is most commonly found. The sound produced by the movement upon each other of the pericardial surfaces at this spot is systolic in time, usually short, sharp, localised

and superficial; it seldom acquires a blowing character. In fact, it often resembles more nearly a rough reduplication of the first sound than a murmur. It is perhaps doubtful whether the altered sound, which is so commonly heard at this spot, is in all cases due to the presence of a "white patch" on the pericardium. The effect of change of position upon this murmur is variable in some cases. I have found it disappear entirely when the patient is in the recumbent position, as often happens in the case of ordinary friction murmurs audible at other places, whilst at times it is hardly at all affected by such a change. Dr. Angel Money's description of this murmur closely accords with my own experience; it was present in twenty-nine of the 111 cases examined by him. Three years ago I examined a gentleman presenting this murmur, who informed me that, fifteen years previously, his life had been refused for insurance on the ground of valvular disease of the heart.

Another favourite site of these local thickenings of the pericardium is the extreme apex of either ventricle; there it usually appears, post mortem, as a shaggy, villous-looking tuft, covering an area the size of a threepenny-piece, whilst on the anterior surface of the right ventricle it takes the form of an irregular flattened star-like patch.

6. *Altered Conditions of the Muscular Walls of the Heart.*—It has been held that a systolic murmur may be produced simply as the result of the contraction of a hypertrophied left ventricle, but of this I have never been able to satisfy myself, and I am disposed to doubt whether it ever takes place. So far we have been dealing with conditions which suggest valvular disease when it is absent. In the following cases we have to explain the existence of valvular incompetence independent of organic change. The subjects of anæmia, rheumatism, chorea, and, I must add, women in the puerperal state furnish the most common examples of this condition. In such cases it is not uncommon to find a systolic murmur at the apex varying much from time to time in many characteristics, usually soft and blowing, but occasionally loud and harsh in quality; often not limited to the apex, but conducted along the axilla to the angle of the scapula, where it may be distinctly audible. There may be found with it a moderate degree of accentuation of the pulmonary second sound. This murmur indicates that the mitral valve is for the time incompetent, but it does not necessarily imply that any structural change has taken place in it. The exact mode in which this incompetence of the valve is brought about has been, and still is, a much disputed point. The very important researches of Hesse[1] of Leipzig, conducted in the laboratory of Professor Ludwig, have thrown much light upon this and on other points connected with the mechanism of the heart's contractions.

Dr. Hesse by very ingenious means has contrived to obtain casts of the heart and its cavities representing as nearly as possible its exact condition in systole and diastole. From these it appears that, contrary to what has generally been taught, there is no shortening of the left ventricle in systole, that the apex although it moves does not approach the base, and that the distance from the apex to a line through the auriculo-ventricular orifices is the same in systole as in diastole. The conus arteriosus descends slightly towards the apex. The heart becomes cone-shaped during systole and is narrowed at the base in both diameters. The apices of the papillary muscles of the left ventricle approach the aortic orifice, not, however, by any upward motion, but by a movement in a plane parallel with that of the auriculo-ventricular orifices. The result of this movement is to allow the anterior curtain of the mitral valve, which is during diastole stretched obliquely across the cavity, to be floated up so that it may assist in closing the orifice, the musculi papillares at the same time contracting in order to prevent the valves from being driven too far into the auricle. Hesse has also shown what a very important part the contraction of the muscular tissue surrounding the auriculo-ventricular orifices plays in effecting closure of those openings. The average of three observations on different parts showed that the circumference of the base during diastole was 65 centimetres, and during systole 36 centimetres, a mean difference of 29 centimetres; the ratio of the circumference in diastole to that in systole being therefore as 13: 7.2, or a reduction of nearly one-half.

Now, in anæmia the muscular tissue of the ventricles is feeble if it be not in a state of commencing fatty degeneration, the cavities are dilated and the cordæ tendineæ consequently stretched, whilst the auriculo-ventricular orifices are probably enlarged. When systole begins, instead of a reduction in the circumference of the base of nearly one-half there is probably only a feeble contraction, and this, added to the increased initial tension of the tendinous cords, the result of dilatation of the cavity preventing the valves from being immediately floated upward, allows of reflux into the auricle, with the usual result, a systolic murmur at the mitral or tricuspid apex, or at both points of regurgitation occurs on both sides. It is interesting to note that, as in pernicious anæmia, the left ventricle is the first to show signs of fatty degeneration; so in chlorotic anæmia the murmur at the mitral orifice precedes that at the tricuspid. I have lately had under my care two cases, which well illustrate the difficulty that often arises in deciding whether or not a systolic apex murmur is of functional origin or due to organic disease. Both were young girls about eighteen years of age, extremely anæmic, and presenting all the well-known signs and symptoms of that condition. In both a loud systolic murmur was audible at the apex and conducted through the axilla to the angle of the scapula. In neither case was there any evidence of pulmonary engorgement. One patient had suffered from a previous attack of acute rheumatism; in the other there was no rheumatic history. Under the administration of large doses of the carbonate of iron the anæmia in both cases almost disappeared; but, contrary to what one would have expected, a loud apex murmur of undoubted organic origin still remains in the patient who gave no history of rheumatism, whilst in the other case the heart sounds are now quite normal.

In such cases a positive diagnosis can only be arrived at by carefully noting the effects of treatment.

The fugitive murmurs frequently found in the subjects of rheumatism and chorea may, I believe, be best explained on the hypothesis I have used in discussing the origin of the apex murmur of anæmia—viz., regurgitation the result of a feeble contraction of the muscular tissue surrounding the auriculo-ventricular orifices. I confess that I have never been able to understand such a condition as "spasm of the papillary muscles." Hesse's experiments appear to have demonstrated the true function of these portions of the muscular tissue of the ventricles. Time does not allow me to say anything on the origin of the hæmic murmurs audible at the base of the heart; and in the arteries it is a wide and well-worn subject on which I have recently published my views.[2]

Having now reviewed the chief conditions which may produce alterations in the heart's sounds simulating the results of organic disease of the valves, I would venture to suggest some precautions useful in the examination of all cases presenting cardiac murmurs. Assuming that an accurate history of the case has been obtained, which is obviously of the greatest importance, and also that the presence or absence has been noted of those consecutive changes in the heart which are almost invariably associated with disease of any given valve, and of which perhaps none affords more information than the site of the apex beat, if there is still room for doubt, it is well to note carefully the following points:—

1. The exact period in the cardiac cycle occupied by the murmur. False murmurs often do not exactly coincide with the commencement of systole or diastole; they often follow the one and precede the other.

2. The site of maximum intensity and the line of conduction of the murmur, these usually do not coincide with what is found in similar murmurs of organic origin.

3. The condition of the lungs. In doubtful apex murmurs signs of pulmonary engorgement are strongly in favour of organic valve disease, as they are almost invariably absent in the reflux of anæmia.

4. The effect of change of position upon the sound. It is most important to examine every case both standing and in the recumbent position. False murmurs often disappear when the patient lies down, whilst organic murmurs, especially that of mitral stenosis, may be only audible in that position. A murmur which suddenly and completely disappears when the patient lies down, provided there be not at the same time any marked alteration in the pulse-rate, is almost certainly not due to organic disease of a valve.

5. The accentuation of the pulmonary second sound is

[1] Beitrage zur Mechanik der Herzbewegung: Archiv für Anatomie und Physiologie, 1880, p. 336.

[2] On the Origin of Anæmic Murmurs. Churchill. 1884.

much less marked in cases of anæmic than organic mitral reflux.

6. The conduction of an apex murmur to the angle of the left scapula is no absolute sign of organic origin; whilst organic murmurs are often inaudible at that spot.

7. False murmurs often disappear completely when the breath is held.

8. The pulse, which cannot err, may at once negative a suspicion of organic disease founded on the presence of a murmur.

The great importance of an accurate diagnosis in cases of suspected valvular disease of the heart as regards both prognosis and treatment, and the practical difficulties attending it, will, I trust, be considered a sufficient excuse for having brought the rather trite subject before you this evening.

ON

SOME COMPLICATIONS OF TRACHEOTOMY, WITH ILLUSTRATIVE CASES.

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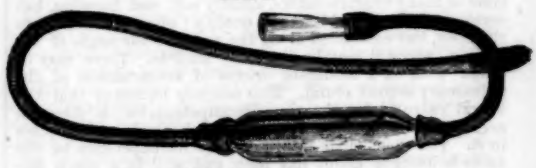
AMONG the cases which present themselves in practice of urgent dyspnœa in children there are some in which a diagnosis is all but impossible; the urgency is so great, the history of its onset so vague and uncertain, that tracheotomy must be performed at once and the diagnosis established afterwards. Amongst such cases will be found a not inconsiderable proportion in which the dyspnœa is not due to diphtheria, but either to a more or less chronic inflammation, or to an unsuspected foreign body or new growth. In many of these cases, owing to the youth of the patient and the smallness of the parts concerned, diagnosis is all but impossible; the true cause may be guessed at but cannot be established, and that being so the proper remedy cannot be applied. I have collected from my case-books of the past eight or ten years a number of these cases, which I purpose relating in the present paper. Their study will help to suggest, in similar cases, a possible diagnosis, and the mode in which sometimes they should and sometimes should not be treated. Cases of diphtheria are a class quite apart; for, besides the local lesion, we have to reckon with a septic condition which may diffuse itself through the system and materially modify the course of the operation. Tracheotomy for removal of a foreign body or for chronic catarrh—a purely local lesion—is an infinitely less serious operation. On the other hand, the subsequent course of these latter cases presents difficulties and anxieties of their own, which are very troublesome. It is chiefly with these that I purpose to deal in this paper, under the term "complications," by which I mean conditions that retard or prevent the restitution of the laryngeal function and the permanent removal of the cannula. These complications are so various and often so unexpected that quite an exceptional interest attaches to them; no two cases ever appear to be quite alike. Some of the complications depend on the almost indispensable use of a cannula to keep the artificial opening in the trachea patent; some depend on the nature of the disease, some on accident.

Certain possible complications connected with the operation itself may just be referred to *en passant*. Occasionally the surgeon, having opened the trachea for laryngeal diphtheria, is disappointed at the non-appearance of air bubbles or mucus or membrane; the truth being that he may have detached a layer of false membrane, or even the mucous membrane itself, from the tracheal wall, and have inserted the tube into the interval so formed. Such a mistake need not lead to any serious consequences, and can be easily remedied; the use of a dilator, and the careful swabbing out of the trachea and larynx, which I advocate as routine practice in all cases of laryngeal diphtheria before any attempt is made to insert the tube, will effectually prevent or remedy such an occurrence. Sometimes, after swabbing out the trachea, when the membrane is very plentiful and very thick, pieces of it get drawn down into a bronchus during forced inspiration, and may materially interfere with the entrance of air into the lungs. Again, if much hæmorrhage occur during the operation, blood may get drawn down into the air passages, where, besides interfering with respiration, it will if left alone shortly decompose, and then give rise to septic pneumonia. In all such cases an effort must be made to remove these obstructions. Other means having failed, the instrument (Fig. 1) will be found very useful.

The death of Dr. Rabbeth, after heroically but ineffectually attempting to suck out membrane and other obstructing products of diphtheria from a tracheotomy tube, induces me to describe this instrument, and the purpose it is intended to serve, more fully than I otherwise should have done, seeing that it is figured and its use indicated in my work on "Tracheotomy in Laryngeal Diphtheria." I hold that diphtheria is largely a local disease at all stages, and that local remedies are necessary if we would successfully combat the disease. With this view I recommend that the larynx and trachea be thoroughly swabbed out with some suitable disinfectant, and that this swabbing be repeated once or twice or oftener during the day, according to the severity of the case, as long as the diphtheritic infection continues to manifest itself by the deposition of membranous exudations. A long feather dipped in glycerine of boracic acid, or other solution, answers admirably for this purpose; its introduction causes the patient to cough, and thus the loosened membrane and other exudations are expelled. Occasionally, however, these exudations get wedged in the bronchi, and then there is more difficulty in getting them out; it is for such cases that my trachea aspirator is intended. Before using, the longer tube is soaked in hot carbolic solution in order to make it supple. The shorter one serves as the mouth-piece. The glass bulb is filled with carbolised cotton-wool; this effectually shuts off the poison from the mouth of the operator when suction is made, for it is well known that even germs cannot penetrate through such a filter as this. The object in performing tracheotomy is not merely the introduction of a silver tube, but the removal of the foreign

FIG. 1.



Trachea aspirator.

matter which has caused the respiratory obstruction, whatever its nature may be, and I believe this may be accomplished through a slit in the trachea held open by a dilator more easily than through a silver tracheotomy cannula. Let the surgeon, therefore, be in no hurry to insert the tube; rather, while the patient is still under chloroform, let him carefully examine the interior of the windpipe, holding it open with a dilator, and make sure that all extraneous matters have been thoroughly got rid of. In one of the cases I am about to relate the diagnosis was difficult and uncertain, but, thanks to this method of dilating the tracheotomy wound and examining the trachea, the true cause of the laryngeal obstruction, a crop of warts on the vocal cords, at once became obvious.

There is a further danger to which I may perhaps just allude, though it is not a complication in the sense in which I am now using the word; I mean the danger of sudden death apart from local conditions. It depends, however, on the fact that the trachea has been interfered with. In my own experience not less than four such cases have occurred. It would seem as if this danger is associated with injury or disease of all the organs supplied by the pneumogastric nerve; thus cases of sudden death are not unfamiliar from simply washing out an empyema cavity, and I can remember a case of gastrostomy in which death rapidly followed the operation, apparently from nerve shock and without other signs to explain it. I will only say that in all these four cases death was quite sudden and quite unlooked for; the breathing appeared to be normal until within a few moments of death, there was no struggling or foaming at the mouth, and that in the cases in which an autopsy was made nothing was found to account for death. The interval between the operation and death varied in all the cases, ranging from four days to four months. I consider them in all respects parallel with the sudden deaths which occasionally follow on opening or washing out

the pleural cavity, or even an over-distension of the pleura. They arise probably from a too powerful or too long-continued irritation of the peripheral branchlets of the pneumogastric.

The cases are classed under the following headings:—1. Acute or subacute changes due to the lesion, for which tracheotomy has been performed. 2. Chronic laryngeal changes. 3. Irritative changes due to the mere presence of a tube. 4. Accidental conditions. 5. Ulceration due to an ill-fitting tube.

1. *Acute or Subacute Changes due to the Lesion, for which Tracheotomy has been performed.*—In severe cases of diphtheria there is sometimes found deep ulceration with excavation of the mucous membrane after the false membrane has been detached, a condition which may be found at any part of the larynx. Such ulceration is usually accompanied by swelling of the adjacent submucous tissue, and the ulcers themselves not infrequently become covered with florid flabby granulations, which are very troublesome to heal. This thickening of the submucous tissue may also be directly continuous with that in the pharynx, and independent of ulceration. After scalds of the glottis it invariably exists for a longer or shorter period, and in greater or less intensity. It is this swelling that leads to the obstruction to breathing (not seldom fatal) which is known to occur after apparently slight scalds of the pharynx and larynx. At the present time I have under observation a child who was tracheotomised four or five years ago for laryngeal obstruction following a not very severe scald of the glottis. Several attempts to dispense with the tube have been made, but hitherto without success.

In the laryngitis which is occasionally associated with congenital syphilis, the lesion is of a rather different kind; it more resembles the mucous patches which occur in the mouth and about the lips. The membrane is thickened and raised owing to its infiltration with cells; the submucous tissue of course partakes more or less in the change. In older children occasionally a destructive phagedænic ulceration may occur either primarily in the larynx, or by extension from the arches of the palate or epiglottis, or from the wound. In perichondritis such as is met with in a few cases as a sequela of typhoid fever and of other febrile conditions, the inflamed mucous membrane is symptomatic of deeper changes rather than a primary condition; its course, clinical manifestations, and treatment will depend on the primary lesion. A form of laryngitis occurs also occasionally after febrile conditions, and the exanthemata are apparently due to the breaking down of exudative material which has collected in the glandular structures of the mucous membrane. These local conditions, which may all give rise to dyspnœa and necessitate the performance of tracheotomy, will generally persist for some time after the operation; the surgeon is usually brought face to face with his case when the dyspnœa is so urgent that the operation must be performed at once, and the diagnosis made afterwards. It is in such cases that the foregoing conditions become complications, the full significance of which will only become apparent at the end of a few days, when, the urgent dyspnœa having been relieved, the question of removing the cannula begins to present itself. The diagnosis of the various conditions is not very difficult, but it is essential to successful treatment. The ulceration which diphtheria occasionally produces may be suspected in the larynx, if respiration through the glottis is delayed for some time after the general disease has subsided, and more especially if a similar condition has been seen about the tonsils or palate or external wound. The expectoration of bits of membrane or of pellets of inspissated mucus with shreds of necrotic submucous tissue attached and blood-stained on the deeper surface occurs from time to time, and makes such a diagnosis almost certain. In most cases of this kind among younger children there will be considerable delay in laying aside the silver tube; if the child be poor and ill nourished, this ulceration may heal very slowly, and months may pass before the laryngeal function is re-established. In syphilis, a diagnosis which has often to be made by a process of exclusion, improvement will rapidly set in on an antisyphilitic treatment, while the condition will remain stationary or become aggravated if merely treated by general remedies. Apart, however, from this method of diagnosis there may be a history of congenital syphilis, and perhaps also evident syphilitic lesions of other organs: thrush in the mouth, snuffling, condylomata about the anus, local thickenings on the long bones or bones of the skull. Any such signs would be in the highest degree suggestive of the probable nature of the laryngeal lesion, if laryngeal obstruction were found associated with one or other of the above-named conditions. In doubtful cases a mercurial course can be tried if the laryngeal urgency is not very great; a few days at most will suffice to test the value of such treatment.

The action of corrosive fluids and of hot steam or water varies with the amount swallowed, with the nature of the fluid, and with the heat of the water or steam. Occasionally diphtheria, or a membraniform inflammation which is indistinguishable from diphtheria,[1] may attack a throat so injured; in which case treatment will have to be in accordance with general principles, as already laid down. If the laryngeal cartilages become diseased they will have to be removed, and the ulceration of the adjoining mucous membrane will probably not begin to repair until their removal is accomplished; furthermore, the necrosed cartilage may become detached and fall into the air-passages unless it is removed. The history of a case should be carefully ascertained in all instances, not only for purposes of differential diagnosis, but for treatment also. A most troublesome point in many of these cases—one, indeed, common to all—will be the difficulty in removing the tube. A consideration of the history, the probable pathological condition of the larynx and trachea, the stage of the disease, its duration, the age of the patient, the presence or absence of secondary lung complications, are details each one of which will have to be carefully weighed and the treatment varied accordingly.

For the purposes of local applications, whether disinfectant, astringent, or solvent, to the throat, nothing is so effectual as a good spray. I would especially urge the value of a steam spray. The greater power of this over a hand spray ensures a finer pulverisation of the fluid which is being used; and it is thus more easily and more thoroughly brought into contact with every part of the diseased membrane, even up in the posterior nares; it is also more easily tolerated. In cases of diphtheria where solvents are being used to destroy false membrane, a steam spray is of first importance. By causing the patient to inhale through the larynx, or making him attempt to do so, the spray reaches the glottis and materially assists in getting rid of the viscid mucus or membrane which tends to collect at this spot. Occasionally, however, strong solutions of nitrate of silver are required, and these of course cannot be sprayed in. For such cases I have found the little instrument figured above very useful. It can easily be made, and bent to any angle most convenient to the requirements of the case. It consists of a piece of glass tubing bent in the flame of a spirit lamp to the required shape, to the end of which an indiarubber mouthpiece is attached. When about to be used, a little nitrate of silver solution of the required strength is put into it; the pointed extremity is passed through the tracheal wound up to the larynx, and the fluid is blown out through the indiarubber tube. By its use the fluid is brought to bear directly on the part affected.

FIG. 2.

An Instrument for applying Solutions to the Larynx through the opening in the Trachea.

The undetected presence of a foreign body near the glottis is sometimes a source of trouble after an operation which has had to be hurriedly performed, and in which the history of the cause and the mode of onset are not clear. In young children the diagnosis is often very difficult, for a laryngoscope can only seldom be used. Even when the history points to the presence of a foreign body as the probable cause, it is not always possible to detect it. In this respect the following two cases are interesting; I had the opportunity of observing both, but they were not actually under my own care.

CASE 1. *Sudden Dyspnœa; no appreciable Cause; Tracheotomy; Death; Autopsy revealed the presence of a bit of Eggshell in the Larynx.*—A small child was taken

[1] For a case of this kind which I have recorded, vide Clinical Society's Transactions, vol. viii., 1875. For a similar case, by Mr. Davies-Colley, see Pathological Transactions, vol. xxxiii., 1882.

suddenly ill with laryngeal symptoms and with urgent inspiratory dyspnœa. It was playing about previously. There was no appreciable cause. When I saw it, shortly afterwards, the child was greatly distressed; its voice was gone, and death seemed imminent. Tracheotomy was at once performed, and gave instant and complete relief. A few days later attempts to remove the tube were commenced, but were quite unsuccessful. The child died in convulsions, and at the autopsy a small piece of eggshell was found adhering to the side of the larynx.

CASE 2. *Sudden Dyspnœa; Fishbone suspected as the Cause; Tracheotomy; Measles; Death; Autopsy; Impaction of Bone in the Glottis.*—A little boy, eighteen months old, taken with sudden dyspnœa while or shortly after eating fish for dinner. The cause was immediately suspected—viz., that he had swallowed a fishbone. A most careful search with the finger was made in the pharynx and upper part of the larynx, as far as possible, but without success. Tracheotomy had to be performed hurriedly. After its completion another search for the suspected bone was made, but with no better success; the tube was then inserted. The boy did well after the operation, except that his temperature remained high. Frequent attempts to remove the tube were made. He could neither phonate nor inspire through the glottis. An attempt to examine with the laryngoscope failed. A catheter could be passed into the mouth through the tracheal wound, but the child continued quite unable to breathe without his silver tube. The question of thyrotomy and other plans of treatment were discussed. The child's age was an element of great difficulty. However, about three weeks after the tracheotomy the child took measles, which was very prevalent at the time, and died of lung complications. At the post-mortem examination the glottis was found quite closed, with a long slender fishbone between the cords. The upper extremity of the bone projected into the pharynx, and it seemed a little remarkable that its presence was not detected by the finger when search was made for it.

These cases are of interest as showing the difficulties which beset diagnosis as well as treatment. In such cases the number of failures will certainly be lessened if the treatment of feathering out the glottis be practised as a matter of routine in all cases. But whether this treatment be adopted or not, it may be laid down almost as a rule of surgery when tracheotomy has been performed on account of a foreign body, that the persistence of the symptoms points to a persistence of the cause; little, therefore, is gained by waiting. The larynx should in all cases be examined, both from the wound and from the mouth, to make sure that the foreign body is not impacted in some part or other of the larynx, and further attempts must be made to remove it.

(To be continued.)

A NEW LONG SPLINT FOR FRACTURE OF THE THIGH.

BY GEORGE SHIRRES, M.B., C.M.,
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IT has often occurred to me while putting up cases of fractured femur in Liston's long splint that if the splint could be lengthened after it had been adjusted to the limb, it would be an improvement; and it seemed that such an object might be attained if the splint were constructed of two pieces or slides fitting into one another. That by such means a splint might be made which could be altered to any length so as to suit a child or an adult, and which after it had been adjusted to the limb might be still further lengthened. With these ends in view a splint has been devised of which the accompanying engraving (kindly supplied by Messrs. Arnold and Sons) gives a very good idea. This splint consists of two iron slides freely movable upon one another. The lower slide having its edges inverted so that the upper may fit into it. It is three feet long by three and a quarter inches broad. The upper slide has on its inner surface a strip of iron on each side; these when the slides are fitted into one another form a hollow along which iron plates may move. Each slide has a long narrow slit passing up its centre, on the sides of which supports may be clamped. Each slide is provided with a support; that of the upper slide consists of a brass bar in the form of a screw half an inch long. The top of this screw expands into a flat circular head with a hole in the centre. The foot of the screw passes freely through the centre of a circular iron plate one inch and a quarter in diameter, and is then riveted into the centre of another plate of the same kind. A thumb-screw turning around the brass bar acts on the upper plate, pressing it down. The brass bar passes along the inside of the narrow slit in the upper slide, the edges of the slit passing between the two iron plates which may by means of the thumb-screw be firmly clamped on to it at any part of its length. The lower support is nearly similar in shape to the upper one, and may in the same manner be firmly clamped on to any part of the slit in the lower slide. To the head of this lower support a screw, one quarter of an inch in diameter and nine inches long, is attached; the upper end of this screw passes through the hole in the centre of the head of the upper support. A disc one inch and an eighth in diameter travels along the screw between the two supports and catches the upper one. The thumb-screw of the lower support is provided with a shoulder which passes through the slit in the upper slide when the two slides overlap one another. The lower plate on the upper support and the upper plate on the lower one can be moved along the hollow between the two slides (formed by the two iron strips on the upper slide). So that the splint may be broken at any part by clamping the supports and connecting them by the long screw and disc. By moving the upper slide along the lower and clamping the supports when necessary, the splint may be made long enough to suit any patient, and when the splint has been adjusted to the requisite length it may be still further lengthened by turning the disc on the screw. The upper end of the splint is rounded outwards so as to fit into the axilla, and is provided with holes for the perineal band. There is an aperture in the splint four and a half inches from the lower end to accommodate the external malleolus. There is also a cross-bar fixed to the lower end of the splint acting as a foot-piece, which may be fitted on at either edge of the splint, so that it may be used for either side.

The advantages which I believe this splint to possess are:—It may be set at any length so as to suit a child or an adult. After the splint has been clamped at the requisite length and adjusted to the limb, extension may be put on by simply turning the disc on the screw so as to do away with the necessity of tightening the perineal band, forming at the same time a very easy and practical method of extension. In transport and on board ship, and in circumstances where weights cannot be used, the gradual extension, which can be produced by means of this splint, will, I believe, be found particularly valuable.

In working out this splint I have to thank Professor Ogston, of Aberdeen, for many valuable suggestions. The splint may be had from Messrs. Arnold and Sons, West Smithfield, London.

Tillotson-place, W.C.

CASE OF

VERTEBRO-MENINGEAL RHEUMATISM.

BY J. E. BLOMFIELD, B.A. OXON.,
RADCLIFFE TRAVELLING FELLOW.

THE case of which the following is a short account occurred in the practice of Professor Jaccoud, at the Hôpital de la Pitié, Paris. Taking into consideration its rarity, and the facility with which the diagnosis of rheumatism could be established, it is worthy of wider notoriety than is afforded by being the subject of a clinical lecture, and is certainly interesting as a contribution to our knowledge, which is far from complete, of the various phenomena of rheumatism. The patient was a man of robust appearance, forty years of age, who had enjoyed good general health until the 24th of January of last year, when he presented

himself at the hospital complaining of pain in the region of the neck, of the shoulders, and in both upper extremities. This painful state was not produced by degrees, but had arisen suddenly without assignable cause. The pain was violent, and, according to the description of the patient, it seemed as if his arms were being twisted off. The slightest movement increased the pain. The seat of the pain was not localised, but it seemed to shoot down the arm. The neck was held quite rigid by the contractions of the muscles, so as to prevent any movement of the cervical vertebræ, and this part of the spinal column was bent backwards so as to constitute a slight opisthotonos.

On examining the arm there was nothing seen to account for the pain. There was no redness or swelling, and the joints themselves were quite free from any suspicion of disease; but it was possible to discover that certain areas of the skin were devoid of sensibility; and, further, that these points were spontaneously painful—that is to say, the patient presented the phenomena of *anesthésie douleureuse*. When seen by Professor Jaccoud it was discovered that the region of the spine marked by the fifth, sixth, and seventh cervical vertebræ was very tender. Pressure over this region increased not only the local pain, but also the pain down the arms; and taking into consideration the character of the pain and the local tenderness, the professor came to the conclusion that the lesion was central, and, further, that it was rheumatic, because there was no history of a blow or other injury. There was no evidence of syphilis or tubercle; in fact, he considered it as a case of articular rheumatism of the upper part of the spinal column, involving the meninges; and, in accordance with this opinion, ordered a treatment of sodium salicylate. But to complete this diagnosis there was one point wanting, and that was the temperature. On the day of the examination the patient's temperature was normal, but in the evening it rose to 39·4° C., thus supplying the fact which was missing. The correctness of the diagnosis was well illustrated by the treatment, for the effect of the sodium salicylate was marked and immediate. The pain diminished, and with it the rigidity; and by the end of February the patient left the hospital practically cured, only a slight rigidity of the neck remaining, obviously due not to the muscular contraction, but to the articular lesion. But in the first fortnight of March he presented himself again at the hospital in exactly the same condition as before, with the addition that the lower limbs were also affected in a similar manner. Soon, however, another manifestation showed itself, which is of great importance as adding another item of support to the diagnosis, and that was the tumefaction and redness in the left knee and ankle.

The patient was now a hopeless cripple in bed, not daring to move a limb because of the pain, which, as before, was much exaggerated by any movement, though when encouraged to make the requisite effort it was found that perfect power over the muscles was retained. This, however, did not last long, for towards the end of March it was found that there was a loss of ability to move the limbs however much the patient tried; in fact, there was complete akinesia and anæsthesia of all four extremities. It is an interesting fact that this loss of motion appeared first in the arms and afterwards in the lower limbs. The treatment adopted at this time was iodide of potassium, but no marked benefit was noticed, and the patient continued in much the same state during April, with the exception that defecation and micturition became affected, and the patient passed his motions under him unconsciously.

In the month of May mercurial inunctions night and morning were added to the previous medication, not with the idea of counteracting any syphilitic taint, but because of the well-known property of mercurials of removing plastic deposits, to which his troubles were attributed, and some slight improvement seemed to be gained. In the month of June the patient was again in much the same state, except that an ulcer over the sacrum was added to his other troubles. In September, during the absence of Prof. Jaccoud, the treatment was changed and strychnia was given, and soon after this a sign of improvement appeared, due probably not to the change of drug, but to the salutary influence of time, aided possibly by the previous medication. Whatever was the cause the power of movement began to return, first, in the upper limbs, and then in the lower, and at the same time the anæsthesia disappeared and gave place to a degree of hyperæsthesia, and with these improvements the ulcer on the sacrum began to heal. The muscles were found to have preserved their electric reactions in a normal state, despite the time that they had remained useless.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas at morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.* lib. iv. Proœmium.

LONDON HOSPITAL.

TRANSVERSE FRACTURE OF THE PATELLA; ASPIRATION OF THE JOINT; SUPPURATION; ANTISEPTIC INCISIONS INTO THE JOINT, FOLLOWED A FEW DAYS LATER BY WIRING OF THE FRAGMENTS; RECOVERY; REMARKS.

(Under the care of Mr. RIVINGTON.)

FRACTURE of the patella is an injury which requires both care and skill in its treatment, and the fact that there is still so much difference of opinion in the profession as to which is the best method to pursue in such cases is an additional proof of this. The methods employed are numerous, and Mr. Rivington's case was one in which it was necessary to use more than one of these methods, and in which there is every prospect of a strong limb and useful joint being secured to the patient.

Charles A——, aged fifty-eight, was admitted on the 29th December, 1883. He had fractured his left patella transversely a little below the middle, by falling on the kerb. There was a great deal of effusion. A back splint and ice-bag were applied. Two days afterwards the house-surgeon made an attempt to bring the fragments together with strapping. On Jan. 11th, there being still much swelling and effusion, Mr. Rivington aspirated the knee-joint, dipping the trocar and cannula in a strong solution of carbolic acid, and using the spray to make "assurance doubly sure." Only two drachms of mingled blood and serum could be obtained. Antiseptic dressing and an ice-bag were applied. On the 16th the house-surgeon tried to reduce the distance between the fragments with Malgaigne's hooks inserted into strapping and gutta-percha, and the separation was diminished about a third of an inch. This procedure did no good, as it increased the effusion, and the hooks were accordingly removed. A week later, finding that pus was oozing from the puncture made by aspiration, Mr. Rivington had the steam spray turned on and an anæsthetic administered, and he opened the knee-joint freely, making an incision on each side of the patella, removing a good deal of clot from the joint, washing it out, and inserting drainage-tubes. Finding at the end of the week that the case was doing well, he had the patient in the operating theatre, and cut down on the patella by means of a vertical incision in the middle line, removed all the vascular granulation tissue uniting the fragments, scraped the fractured surfaces, taking away projecting edges with cutting pliers, and wired the fragments together. The wire was beaten down on to the patella, the lateral openings enlarged, and drainage-tubes inserted. The operation was performed with all antiseptic precautions, and a back splint applied on its completion. On the 5th the wounds were redressed; there was very little discharge. On the 12th the drainage-tubes were removed, and on the 22nd the openings into the joint had closed. On March 7th antiseptics were discontinued. On the 10th the wounds had healed. On the 22nd the limb was taken off the splint. There was considerable inflammatory thickening round the knee-joint, and it was slightly painful as well as stiff. On the 25th the patient was allowed to get up. Change from the horizontal to the vertical position produced œdema of the limb. The patient, naturally a spare, delicate-looking man, was in fairly good health, although weakened by his long illness. He could not bear any weight on the limb. By April 7th he was able to walk a little, but his feet swelled when he was up, and more especially the left foot. He was ordered an elastic bandage. He had very little movement in the joint, and no attempt was made to remove the stiffness for fear of breaking down the union of the fragments,

as has happened in other cases. The knee-joint ached occasionally, but there was no severe pain. There was bony union, and the patient was daily gaining power when discharged.

Remarks by Mr. RIVINGTON.—Although it may not be desirable to treat all cases of fracture of the patella by wiring, and although I should hesitate to undertake the operation in an old case where there was much separation, and where division of the quadriceps was likely to be required to bring the fragments into position, I think the procedure is indicated in recent cases like the foregoing, where there is difficulty in drawing the fragments into good position. Hitherto the operation, considering that it is a new procedure, has been attended with very favourable results, for though two deaths have taken place in more than fifty cases, in one at least of the cases certain precautions were omitted which experience would now suggest. There was no lateral incision made for drainage, and the fragments were not brought nearly into apposition. When this is found to be impracticable it would be safer to abandon the operation, as I think was wisely done by my colleague, Mr. Mansell Moullin, in his published case. In the second fatal case the operation was severe, and the patient, being a hard drinker, was a most unfavourable subject for its performance. The failure of the aspiration in the present case was doubtless due to the late period of its use, the blood having coagulated in the joint, and I think the suppuration must be attributed to the attempt made to bring the fragments together with Malgaigne's hooks. I should not myself have selected this procedure whilst the effusion remained unabsorbed. The use of Malgaigne's hooks I have always avoided, except when employed by insertion into strapping or gutta-percha. Some years ago a case occurred in which the direct use of the hooks necessitated amputation of the limb. On the other hand, some very good results have followed their employment in the mediate method mentioned. Two cases in which bony union and good movement were obtained were shown at the London Hospital Medical Society about a year ago. They had been under my colleague, Mr. Couper. I examined them carefully, and could not detect any mobility of the fragments, which were apparently united by bone. Time, however, sometimes proves the fallacy of supposed bony union. In a lecture published by Mr. Hutchinson in March, 1882, he states that he obtained bony union in about half his cases treated with back splint, strapping, ice, and abstinence from examination of the fragments. I have not myself been able to obtain anything like this proportion of osseous union by the same method, and I must confess that I am sceptical as to the proportion given even by so deservedly high an authority. The future treatment of fracture of the patella must, I think, depend on whether bony union is to be obtained. If possible or not, certainly limbs do not always appear to be so useful or satisfactory to the patients when bony union has been secured as in many cases of fibrous union; but, on the other hand, there are a good many instances of fibrous union in which life is rendered miserable by the condition of the limb. If we are to be satisfied with fibrous union, Mr. Heath's plan of immediate treatment by plaster-of-Paris, allowing the patient to walk about on crutches, is as good as any other, and obviates the risk of atrophy of the quadriceps and the disagreeable confinement to bed. If we are to aim at bony union, some other method more reliable than the ordinary modes of treatment must be adopted. In Mr. Mitchell Banks's valuable Clinical Notes mention is made of a simple plan of bringing the fragments together by passing a thick silver wire through the joint immediately underneath the patella, and pressing the fragments together and retaining them in apposition by twisting the ends of the wire over pads placed in front of the bone. Antiseptic precautions are adopted. I have not yet had an opportunity of trying this method, but I hear it favourably spoken of by those who have done so. The interval in the above case, between opening the joint to remove breaking-down blood-clot and wiring the patella, was allowed to elapse for the purpose of avoiding any discredit to the operation in case the foundation had already been laid for inflammatory action and blood contamination by the breaking down of the wound made in aspiration. The patient's temperature had risen to 101°, and he did not seem so well as he had been. He improved after the joint was cleared, and his temperature did not exceed 99° during the treatment after wiring the patella.

BOURNEMOUTH COTTAGE HOSPITAL.

SEQUEL TO THE CASE OF BULLET WOUND OF THE SKULL; NECROPSY; REMARKS.

OUR readers will recollect the case of bullet wound of the skull which was published in THE LANCET of Jan. 10th, and will read with interest the following notes of the case, for which we are also indebted to Mr. F. Gardner, who appends remarks. The patient was under the care of Dr. Hartford during the latter part of the time. Cases of injury to the brain are not uncommon. Bullet wounds are somewhat infrequent in civil practice; when they do occur, they are usually the result of attempted suicide, and a fatal result generally ensues early. At the present time, when the surgery of the brain has received a fresh impetus, tumours being not only diagnosed and localised by the physician, but removed by the surgeon, the careful observation and record of cases of wound or injury of that organ are specially important.

The patient remained quite well from Dec. 13th until Jan. 1st, 1885. The wound did not heal, however, a small quantity of pus escaping daily.

Jan. 1st.—The patient complained of much pain in the head. He had had no sleep. There was very little discharge from the wound; there was no paralysis; no fever; pulse 60.

2nd.—Pain in head had increased; patient was more restless. There was an increase in amount of discharge from the wound. He complained of loss of vision of both eyes. Temperature 97°; pulse 40, and weaker.

7th.—Vomiting came on and patient was more restless; bowels constipated.

9th.—Patient had constant nausea, also a convulsion. Temperature 97°; pulse only 20. Breathing was very slow and there was considerable accumulation of mucus in the throat and chest. Bowels constipated in spite of purgatives. Patient was only semi-conscious.

11th.—Patient became more and more comatose, and died at 4 P.M.

Autopsy, twenty-three hours after death.—Rigor mortis well marked; body well nourished. The wound in the left eyebrow presented the appearance of a depressed cicatrix, the centre being adherent to the structure beneath. A small sinus passed in some distance to some rough bone. On opening the skull the membranes presented no sign of recent or old inflammation. On removing the dura mater the surface of the brain presented a healthy appearance, except at the anterior aspect of the left frontal lobe, which was blackened, and from which a quantity of very fetid green-coloured pus escaped through an opening inadvertently made into the substance of the brain in removing the calvaria. On removing the brain the cranial nerves were seen to be healthy, and the dura mater lining the base of the skull showed no trace of inflammation. The neighbourhood of the wound in the frontal bone was next examined. A mass of bone projected on the inner surface, the mass presenting sharp bony points, to which the brain was firmly adherent. This mass of bone appeared to have been pushed through the dura mater, and so pressed directly on the brain at a spot corresponding to the blackened surface of the left frontal lobe. Some loose pieces of bone, with rough edges, were removed from the inner and upper aspect of this projecting mass. When removed, a cavity was opened, in which lay the bullet flattened antero-posteriorly and separated from the skin and depressed cicatrix in the wound by small pieces of bone similar to those removed from the inner part of the projecting mass. The bullet lay immediately beneath the level of the outer wound, resting on the orbital plate of the frontal bone. The cavity in which it rested had blackened walls and contained a little pus. The brain was then examined. The whole of the left frontal lobe was blackened on its anterior aspect, and its substance was occupied by a large abscess containing some three or four ounces of very offensive-smelling, greenish-coloured pus. The smell was characteristically gangrenous. The rest of the brain was healthy; there were no signs of inflammation or other collections of pus. The other viscera were not examined.

Remarks by Mr. GARDNER.—The post-mortem examination confirms the opinion given that the bullet in this case remained within the skull, although the patient to all intents and purposes recovered from the injury. The man was shot on Aug. 13th, 1884, and was discharged from hospital on Oct. 1st, 1884, strong and well, with only a small granulating wound at the seat of injury. He remained quite well

without a single symptom, cerebral or otherwise, until Jan. 1st, 1885, three months after he left the hospital. The wound, however, had never healed. On Jan. 1st, 1885, he first complained of headache, and after twelve days he died. This case makes another addition to those already on record of the possibility of recovery even with a foreign body within the skull, and in close proximity to the brain. Such cases are now not very rare. The points of rarity in this case are:—1. The absence of meningeal inflammation, although the dura mater was pierced by a mass of bone with rough edges. 2. The absence of cerebral symptoms, although this mass pressed upon the brain and its sharp bony points were adherent to the brain substance. 3. The absence of any fever during the last twelve days of life, although post mortem an abscess containing four ounces of fetid pus was found in the frontal lobe of the brain surrounded by gangrenous brain substance. It is also worthy of note that in the remarks on the case as published in THE LANCET of Jan. 10th, the probable situation of the bullet was suggested as being below the level of the wound and resting on the orbital plate of the frontal bone. In this position it was found and, as also proposed, the brain was uninjured by the ball itself. That such an accumulation of pus should be found within the brain with no symptom of fever, paralysis, or cerebral irritation, beyond headache, is a remarkable fact.

HALIFAX UNION INFIRMARY.

A CASE OF CÆSAREAN SECTION; DEATH; AUTOPSY.

ON Dec. 30th, 1884, Dr. Dolan performed the operation of Cæsarean section on a primipara, aged twenty-six, a pianist, whose height was only 3 feet 11 inches. She had been in labour five hours. There was great pelvic deformity, the antero-posterior diameter being one inch and a half. Carbolised catgut was used for the uterine wound, silver wire for the abdominal walls. The child was living. The patient died in fifty-four hours.

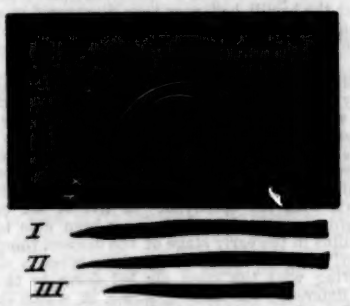
A post-mortem examination was held seventeen hours after death. The uterine wound was found open, a large clot having been forced through it, owing to the occurrence of vomiting. There was peritonitis, which was the probable cause of death.

NEWCASTLE-ON-TYNE INFIRMARY.

WOUND OF THE CORNEA, WITH PROLAPSE OF THE IRIS; REMOVAL OF FOREIGN BODIES FROM THE ORBIT; CURE.

(Under the care of Mr. FREDERICK PAGE.)

THREE months ago a young married woman was admitted into the Newcastle-on-Tyne Infirmary in consequence of an injury to her left eye, which she had received three days previously, as she said, from a blow. Both eyelids were swollen, and in the cornea, at the situation indicated on the diagram I, was a ragged wound, a quarter of an inch in



length, through which a piece of iris protruded the size of a large shot. There was no blood in the anterior chamber and the lens was unaffected. No other wound could be seen. A strong solution of atropine was put into the eye at intervals, and twice or thrice the protruded iris was touched with nitrate of silver. In a few weeks the wound in the cornea healed, and she was allowed to go home, still, however, with some swelling of the lids. Six weeks after the accident she returned complaining of pain and difficulty in opening her left eye. At the situation marked 3 in the diagram a foreign body could be felt beneath the skin some distance from the surface. The lid could not be everted. A cut was made in the skin, and with some difficulty a steel headless nail, of which I. is an exact outline, was extracted from the orbit. In a few days she was seen again, and in precisely the same situation another foreign body was detected. She was put under chloroform a second time and another nail (II.) extracted. On everting the lid an unhealed wound in the palpebral conjunctiva was seen, through which the nails had entered the orbit. Eight weeks after the accident she again applied, complaining of a purulent discharge and uneasiness about the inner canthus. At the spot marked 4 another nail could be felt through the skin. Separating the lids as far asunder as possible with a speculum, under chloroform, a careful search showed an unhealed wound of the conjunctiva of the lower lid, from which another nail (III.) was drawn out of the orbit. In the sclerotic, opposite this wound, and in a line with the wound in the cornea, was the cicatrix of a recently healed puncture; and Mr. F. Page believes that nail III. had transfixed the globe, entering at the ragged wound in the cornea, passing out of the eyeball at the spot marked 2, and burying itself in the orbit at 4. The patient now has a useful eye, her sight is unaffected, and her pupil nearly perfect.

On going more carefully into the history of the case it was ascertained that the woman was in a cupboard reaching an iron saucepan from a shelf above her head. The saucepan fell, struck her on the head, and she fell down insensible. In falling, to reach the floor she had to pass another shelf, upon which stood a flat box containing a number of nails like those taken from the orbit. It is strange how these nails got where they were found, and passing strange that the patient should have escaped without injury to the optic nerve or brain, and with a good useful eye. It may be added that the patient is a strong healthy woman with a family, and that there is no reason to doubt the account she has given of the accident.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Conclusion of the Discussion on the Tubercle Bacillus and Pathology of Phthisis.

A SPECIAL meeting of this Society was held on Wednesday last, the President, Dr. George Johnson, F.R.S., in the chair.

Dr. K. FOWLER said that he wished to make a few remarks on the distribution of the lesions of phthisis, more especially in relation to the presence of some septic virus as the agent in disseminating tubercle from one part of the lung to another. Tubercular lesions were not found to extend at random through the lungs, and generally not by direct extension of the morbid process. The situation of the secondary lesions of phthisis gives evidence of the presence of tubercular virus. It should be observed that lesions in the upper lobe do not differ from those found in the lower lobe; those who hold to the inflammatory theory say that the tubercular disease is grafted on the primary inflammation. He was frequently seeing cases of arrested phthisis; such instances were met with clinically and at the post-mortem examinations. In those who die of cancer evidence may be found that they had previously been the subject of tuberculosis; there is a family history of phthisis in many cases of cancer. In the specimens of arrested phthisis some puckering of the pleura and fibrosis of the underlying lung, with pigmentation, were to be found; and very frequently also there was infiltration about the posterior horizontal branch of the bronchus, near to the posterior apex of the lower lobe, and almost exactly opposite the fifth dorsal spine. This lesion may be arrested in the state of cavity. In other cases of phthisis this region was very prone to be affected. He considered that the virus of phthisis was of a specific nature, and since the bacillus had been discovered he was inclined to accept it as the specific agent. This virus would account for the auto-infective property of tubercle. The secondary deposit of tubercle was not always situate on the same side of the lungs as the primary one; we may have a "crossed lesion," and in these cases the patient could not lie on the side the lung of which was primarily affected. Probably infection took place during the night, and was due to the

inhalation of septic material along the bronchi. He believed in the unity of phthisis. With regard to heredity, he could not concur in the views of Germain Sée, that the child derived its tubercle from the blood of the mother during fœtal life. In most cases of acquired phthisis he thought that the virus of the disease was taken in through the respiratory passages. There was danger from the close aggregation of healthy with tubercular individuals when a predisposition existed in the former; predisposition may vary at different periods of life, just as may be evidenced in zymotic diseases. Three factors were necessary to the development of tubercle: (1) the seed of the disease, which was probably the bacillus; (2) a proper soil, either hereditary or acquired; and (3) certain conditions, which may vary from time to time even in the life history of the individual.

Dr. S. COUPLAND spoke of the great contrast between the views now prevalent and those generally held about 1873, when the discussion took place at the Pathological Society, at which Dr. Wilson Fox and one or two others were the only supporters of the view that all phthisis was essentially one and the same disease. He considered that whereas Dr. Bastian advised at that meeting the absolute disuse of so misleading a term as tubercle, it would appear that now the word would be quite appropriate. Our conception of tubercle is now infinitely wider than when Virchow first gave the name to the miliary bodies. Whereas histological features were generally accepted as the test for tubercle, and experimental inoculations used to be thought fallacious, now the position was reversed, and histology was regarded as insufficient to establish the nature of a supposed tubercle. The views which regarded phthisis as everywhere the same were more firmly substantiated by the recent additions to knowledge, and these recent acquirements were decidedly of value even if they only confirmed the knowledge which had already been attained. If we apply this new test of the bacillus to discriminate the tubercular from other lesions, the field of tubercular disease will be found to be very much widened. Koch had found the tubercle bacilli in two cases of ulcer of the tongue, in four cases of strumous pyelitis, in cases of chronic disease of the bladder and rectum and of suprarenal disease, and in a case of tubercular disease of the uterus; also in specimens of strumous disease of the testicle, and in caseous tumours of the brain, as well as in twenty-one strumous caseating lymphatic glands, chiefly of the neck. The bacillus had been found also in the granulation tissue of chronic disease of joints and of diseases of bone, and scantily in examples of lupus of the skin. These observations are quite in accordance with the accepted views of tuberculosis as a general infective disease which may attack the body at any point, and which thence is liable to become further disseminated throughout the system. The evidence in favour of the real arrest of the tubercular process was strong. It might be that it was through the activity of the bacilli that the caseous matter is softened, and hence an explanation of the large numbers of bacilli usually found in caseous matter is afforded. It might be that, owing to the inertia and want of activity of bacilli, parts became shrivelled, fibrous, and cretified.

Dr. THEODORE ACLAND said that it required one who had worked in this field to properly appreciate the value and labour which Dr. Kidd had bestowed on his researches. He proposed to deal only with the practical side of the question, and proceeded to relate the results of some observations made by himself and Mr. Edmunds on the presence or absence of bacilli in the sputum. In all cases where it was possible he had inquired into the occurrence of the bacilli in the tissues of the patient after death. He had succeeded in finding bacilli in nearly all cases of tubercular disease which he had investigated. In some instances he had found innumerable bacilli during life, but none after death. In others, though there were innumerable bacilli found in the lesions after death, he had not detected any during life. Special mention was made of a case of laryngeal disease in which, though bacilli were abundant, there was not a single giant cell to be seen in the tubercular lesion, though many microscopic sections had been examined. In three cases of general tuberculosis he had not been able to discover a single bacillus; also in one of tubercular peritonitis, and in cases of tubercular disease of joint and bone. He had not found the micro-organisms in those tissues which had not been exposed to the atmosphere. His methods might have been at fault, but yet in every specimen of Perlsucht in bovine tuberculosis he had not failed to detect the bacilli. He alluded to the fact that Dr. Hensen of Bergen had found bacilli like those of tubercle in leprosy and glanders. He asked how it was that there was frequently no proportion between the number of bacilli and the extent of the tubercular lesion. Reference was made to a paper recently read by Mr. Croft, in which, though many specimens of diseases of the joint were examined, he had not been able to procure a single one in which a bacillus was present; and, further, Dr. Mules had been unable to discover bacilli in tubercular choroiditis (Ophthalmological Transactions, 1884). Here we must suppose either that the lesions were not tubercular or else that bacilli may be absent.

Dr. DOUGLAS POWELL then read a letter from Dr. Creighton, which expressed regret that he was unable to be present at the meeting. The chief passage in the letter was as follows:—"The interpretation put by Mr. Watson Cheyne upon a printed sentence of mine relating to Koch's procedure is one that I certainly did not intend it to bear, and did not suspect that it could be made to bear. I wish most explicitly to disclaim any charge of personal bad faith against Dr. Koch, and to express my regret that the words 'his omission might be taken in good faith,' which I inadvertently let pass, should have given the slightest colour to that charge."

Dr. HERON congratulated Dr. Kidd on so valuable a piece of work, which was an able endorsement of the work published by Koch in 1882. He then criticised some of the remarks made by Sir Andrew Clark, who stated that in eleven cases of fibroid phthisis he had not discovered the bacillus, though whether the investigation was clinical or anatomical, or both, did not appear. The bacillus would most certainly be found in such cases if sufficient search were made. Similarly with regard to the cases of acute tuberculosis in which no bacilli had been detected. He considered, in opposition to Sir Andrew, that if the life history of caseous pneumonia were so very distinct from the life history of tubercular phthisis, the occurrence of the same bacilli in both forms of disease tended to minimise the importance of the part played by the life history. At the London Hospital, a few years ago, he ventured to assert that the presence of the organism might be an aid in prognosis, for where the bacilli were numerous he predicted a rapid course, and where they were scanty a slow one. He was glad to hear the remarks of Dr. Moxon on the prognostic significance of clumps of bacilli in the stained specimens of sputa, for he had also made the same observation, and seeing that it remained so long unverified, he had been somewhat disappointed.

Dr. BERNARD O'CONNOR criticised some of the remarks made by Dr. Green and Mr. Watson Cheyne. If bacilli were the index of tubercle, what are we to say about Lustgarten's discovery, in chancres and syphilitic gummata, of bacilli undistinguishable from the bacilli of tubercle.

Dr. DRYSDALE reviewed the various theories which had been extant during the past forty years. After studying at Paris and working at the Consumption Hospital, he became convinced that phthisis was a virulent inoculable disease. He said that the bacilli had now been discovered in about 3400 cases and were absent in but a few. He regarded this new doctrine as the most important addition to pathology known to him.

Mr. MACNAMARA referred especially to the investigation of early stages of tubercular disease of bone, such as may be met with in the head of the femur, where the child not unfrequently dies from tubercular meningitis or from tubercle of the lung. He had failed to verify the presence of tubercle bacilli in a growth which could be nothing else than tubercle. The process began at the junction of the diaphysis with the epiphysis. In five or six cases most thoroughly examined, he had never been able to discover the bacillus in the early stage of the disease, though he had frequently found the micro-organisms when a sinus communicating with the open air led down to the diseased bone. Reference was made to a case, in which the patient had suffered from pain in the femur for years, which had been under the care of Mr. Cowell. In this case a sudden accession of fever with formation of abscesses in the popliteal space was the indication for amputating the limb. It was then found that the matter was full of bacilli, although there had been no external opening, and without there being any opening into the cavity of the bone itself. The bone was exhibited to the Society. This patient had no symptoms of phthisis, and it was surprising that there should have been no extension to the rest of the body.

Dr. PERCY KIDD, in reply, said that the discussion had

not called in question the specificity of the bacillus until this evening. Remembering the ignominious collapse which took place after Spina's publication, it would be well to hold our hands before accepting the results of Lustgarten's researches in syphilis. The objections made by Dr. Creighton, if they could be sustained, were serious; but it seemed to him that Mr. Watson Cheyne had already fully answered them. Dr. Wilson Fox had referred to the aniline dyes as liable to lead to error, but Koch did not trust solely to the staining of the bacillus as a means of proving his point, for the cultivations and inoculations were far more important, though the staining was a convenient method of finding the bacilli in the tissues. Koch admitted that other micro-organisms may give similar reactions—as, for example, that of leprosy. With regard to Dr. Green's definition of phthisis, he would accept it as more perfect if the qualification that "consolidation which had a tendency to undergo fibro-caseous changes" were added. The idea of the septic virus had been known since the time of Villemin. He agreed with the views of Dr. Wilson Fox and others on the unity of phthisis. In his own experience he had found the detection of the tubercle bacillus to be of great value in doubtful cases. It must have been a great satisfaction to Dr. H. Weber to have predicted that phthisis was a germ disease so long ago as 1868. From his observations he would say it was not uncommon to find the bacilli *in* the ordinary cells of tubercle, especially in cases of acute miliary tuberculosis. With regard to the observation of Metschinkoff, quoted by Mr. Sutton, he thought that it was of much significance. The insemination of tubercle might be prevented by the protective influence afforded by the vigour of the cells of those individuals who were not prone to phthisis. He regarded the epithelioid cells of tubercle as perhaps the most important histological elements in the early lesions of tuberculosis. As to the remarks of Dr. T. Williams on the protective action of the giant cells, he said that this was not proved by the bacilli being at the periphery of the cell, for it was here that the nuclei were situate, and where activity was greatest. The giant cells seemed to be inert structures, and in his opinion did not have any defensive action. The small number of bacilli in acute miliary tubercle was remarkable; the bacilli were more numerous in nodules rather larger than the miliary bodies, and where there were the signs of catarrhal pneumonia round about them. The number of the bacilli probably depended on the stage of growth. It was not at all infrequent to have to examine many sections before bacilli were found. As to the method of preparation and examination which he had adopted, he could only say that he had followed the account of Mr. Watson Cheyne, given in the *Practitioner*, in his report to the British Medical Association. The sections were left about twelve hours in the first staining solution, though two hours, with sufficient warming and changing of the fluid, were enough in some cases which he had tried. He advised the use of benzol instead of chloroform for dissolving the Canada balsam, and cedar oil instead of oil of cloves. At one time he believed the bacilli were only to be found in lesions exposed to the atmosphere, but he had now given up this notion. He had undoubtedly seen bacilli in a caseous vesicula seminalis, though they were rather scanty. In this patient there were follicular ulcers in the ileum. It is possible that the spores of bacilli may be present without the rods; and as the former may not be stained by the ordinary methods, this would explain the failure to find bacilli in some cases. Inoculation was followed by tuberculosis, even when the tubercle failed to yield evidence of bacilli. Koch had found bacilli in every one of nineteen cases of acute miliary tuberculosis examined, and Dr. Kidd had not failed to discover them in six instances. He regarded Mr. Watson Cheyne's suggestion of a chemical poison produced by bacilli as very valuable. He believed that spread by contiguity only took place to a small extent; the blood-vessels disseminated tubercle widely. Bacilli may be seen reaching into the lumen of the artery in tuberculosis of the pia mater. Weigert's observations on the spread of tubercle by the pulmonary veins were made before the bacilli were discovered. He could not coincide with the view of Dr. Moxon, that we should not expect to find tubercular bacilli in cases of fibroid phthisis. In conclusion, he did not think that the bacillus afforded a complete solution of the tubercular process, though he believed it to be essential. Koch had suggested abrasions on the skin as not improbably the mode of inoculation in some cases. The denudation of epithelium after measles was a doubtful explanation of the determination of tubercle to the lung. It was not impossible to explain the wide differences between caseous pneumonia and fibroid phthisis on the views now held. As to diathesis or disposition, he asserted that some peculiar disposition on the part of the individual was necessary. There was nothing to support M. Germain Sée's notion of the mode of inheritance of tubercle. He was in complete accordance with the views of Dr. Andrew, expressed in the Lumleian Lectures, which postulated the coexistence of a predisposition with the introduction of some virus from without.

PATHOLOGICAL SOCIETY OF LONDON.

Malignant Disease of the Spermatic Cord.—Congenital Disease of the Heart.—Synostosis of Dorsal Vertebræ.—Tubular Epithelioma of Upper Jaw.—Suppuration in Joints in Congenital Syphilis.

AT the ordinary meeting of this Society, held on Tuesday last, Dr. J. Syer Bristowe, F.R.S., President, took the chair for the first time.

Dr. BRISTOWE, on taking his seat as President, delivered an address, in which he glanced at certain points in the history of the Society as he was acquainted with it from personal experience, and recalled certain reminiscences of some of its presidents in its earlier years—of Dr. Latham, Mr. Cæsar Hawkins, Dr. Babington, and Dr. Copeland. The Society had only been in existence a few years when Dr. Bristowe joined it, and he bore witness to the success which it more rapidly attained than any other Medical Society; it became and continued a success because it satisfied a real want. It was emphatically the Society of the young and ardent seekers after truth in that branch of knowledge which is the foundation of all scientific medicine. The Society could only encourage original investigation of the first order indirectly by inducing workers to display specimens which presented points of novelty or of special interest. Its chief duty was the collection and record of material; discussion of the specimens shown could never be prolonged, for it was impossible for anyone to discuss an abstruse pathological subject on the spur of the moment. He fully agreed with the view expressed by his predecessor in the presidential chair, that the formal debates which had been held on several occasions lacked spontaneity, and were in reality but a series of monologues.

Dr. PYE-SMITH, at the end of the meeting, proposed, in a few well-chosen terms, a vote of thanks to the President for his address, which was seconded by Dr. CAYLEY and carried by acclamation.

Mr. A. J. PEPPER read notes of a case of Myxoma of the Left Spermatic Cord, removed from a patient aged seventy-five years. The tumour had been growing for ten months; it weighed, when fresh, rather more than a pound. It was completely encapsuled and was readily shelled out of its bed of areolar tissue. Two or three small cysts projected from the growth, the anterior surface of which was deeply grooved by the spermatic cord. Neither the testicle nor the vas deferens was implicated. There were no secondary deposits. The sectional surface presented generally a gelatinous quivering appearance. Under the microscope there was seen a clear ground substance, threaded by fibres of connective tissue, and strewn with round, oval, angular, and branched cells. In some parts round and fusiform cells, and even cartilage cells, were to be seen. The author of the paper remarked that he had used the term "malignant" on account of the rate of the growth of the tumour and its structural affinity to sarcoma. He then alluded to several recorded cases of connective tissue tumours springing from the spermatic cord, and remarked on the impropriety of classing them with the carcinomata, since in the first instance they attacked neither the skin nor the spermatic epithelial tract.

Mr. PEPPER also exhibited specimens of Colloid Cancer. The primary growth sprang from the connective tissue of the left spermatic cord, apparently having arisen from the remains of some fœtal epithelial structure, since neither the testicle nor the vas deferens was affected. Seven years later the œsophagus became the seat of colloid cancer, and from this the patient died. At the post-mortem examination similar deposits were found in the omentum, abdominal glands, and in the right spermatic cord.—Dr. BRISTOWE inquired whether the disease was colloid in the œsophagus; this was answered in the affirmative.—Mr. ALBAN DORAN

asked whether there were secondary growths within the cyst of the first specimen.—Mr. PEPPER replied that there were not; the cyst wall was smooth internally.—Mr. BUTLIN referred to a case under the care of Mr. Walsham, in which the growth was a spindle-celled sarcoma; it was possible for epithelial tumours to originate from the tunica vaginalis. Another case, removed by Mr. Willett, was also a sarcoma, and here the testicle and tunica vaginalis were perfectly free from disease.

Dr. NORMAN MOORE showed a specimen of Congenital Malformation of the Heart. The case was that of a boy aged three years, who was under Dr. Moore's care at St. Bartholomew's. The heart showed great hypertrophy of the right ventricle, the left ventricle being of normal size. The tricuspid and mitral valves were natural. The pulmonary artery was given off at the normal situation; at its root its external measurement was barely a quarter of an inch. Internally its valves were represented by a small cone projecting into the artery, with a perforation at its apex no larger than a medium-sized pin. The aorta was larger than natural, and measured three-quarters of an inch across (external measurement at its origin); its valves were normal, and its orifice communicated freely with both ventricles exactly over a circular orifice at the top of the ventricular septum, about three-quarters of an inch in diameter; the foramen ovale was also widely open. The ductus arteriosus was closed, and the distribution of the vessels of the aortic arch was normal. During life the child was deeply cyanosed, and when it had measles the rash had the appearance of a general purpura. The child was under observation from April 10th to Nov. 4th, 1884. When its heart was acting quietly a systolic murmur was audible all over the chest, most distinct at a point midway between the left nipple and the sternum. There was no thrill when the heart's action was irregular, owing to pulmonary catarrh, and then no murmur was audible. In addition to a deep general cyanosis there was great dilatation of all superficial veins, those of the eyelids being especially sinuous and distended. The veins of the fundus of the eye were very tortuous also. There was always an offensive discharge from the mouth, and the child sank rapidly with a necrosis of all the tissues of the right cheek, including a small piece of the superior maxillary bone. The fingers and toes were greatly clubbed. On cutting into them at the autopsy, the clubbed ends could be reduced by pressure to the normal shape. Microscopical sections of one of the terminal phalanges of the second right toe showed that the clubbing, while chiefly due to mere engorgement, was associated with some thickening of the walls of the blood-vessels. There did not seem to be any general increase of connective tissue. The mother had had another child cyanotic soon after birth, which died at the age of eighteen days. The cyanosis of this child was not noticed till some time after birth. Dr. William Hunter, in 1783, gave the first exact description in England of a heart with a small pulmonary artery and free communication between the auricles and between the ventricles. The cause of death is various in these cases. In the present one it is worthy of remark that death was due to necrosis, a change directly due to the defective conditions of circulation. In spite of its extreme cyanosis the child passed through an attack of measles with no more difficulty than a healthy child.

Mr. DAVIES-COLLEY showed photographs of a case of Synostosis of the Dorsal Vertebræ. The patient was a man aged thirty-two, whose father had rheumatic fever twice, and his mother died of phthisis, otherwise there was no history of gout or rheumatism. He was a sailor at the age of seventeen, and then began to suffer from severe rheumatic pains as the result of exposure to all kinds of weather. He was later on subjected to great alternations of temperature at a cement factory; later still he found great difficulty in rising after stooping, and was frequently exposed to the action of cold and damp. About eight years ago the back began to grow out, and he suffered from lumbar and abdominal pain. Nearly eleven years ago he had an attack of gonorrhœa, which caused no difference in the previously existing rheumatism. His height used to be 5 feet 6 inches, but was now 5 feet 2 inches. There was no tenderness on pressure over the dorsal spinous processes. The erector spinæ muscles were fairly strong. Difficulty was experienced in going upstairs. At the junction of the first rib cartilage with the sternum there was a prominent bony mass. The chest was very rigid and scarcely expanded half an inch in full inspiration. There was but an interval of two inches between the umbilicus and ensiform cartilage. The knee-jerks were normal. He improved under treatment with iodide of potassium. Similar cases had been recorded by Mr. Clutton, Dr. Allen Sturge, and Dr. Fagge. The disease was probably due to a chronic inflammatory change occuring in the periosteum and ligaments around the vertebræ, or possibly in some cases between the laminæ and spinous processes. There was possibly also some outgrowth of bone about the head and tubercles of the ribs, which would cause diminution in the thoracic movements. The gonorrhœa did not have anything to do with the causation of the disease, for the rheumatism was not worse when the gonorrhœa came on.—Dr. WILKS thought that such cases were not uncommon, though but little recognised clinically. Many of the pains and other troubles which old persons experienced were due to such changes. It was very common to find various degrees of ankylosis between the vertebral joints which were of the nature of osteoarthritis. He referred to the case of a lady who suffered pain in the large occipital nerve, and in whom all the limbs were affected with chronic rheumatic arthritis.—Dr. NORMAN MOORE said that he had shown in the last session of the Society specimens of the vertebræ of a Roman in whom the osteo-arthritic disease was exceedingly well marked. The vertebræ may be ankylosed by an overgrowth of bone between the dorsal spines as well as between the centra. He considered that the changes in young people were not the result of the same disease as that which occurred in old people.—Dr. GOODHART asked how far injury, as the carrying heavy loads on the back, could account for such conditions.—Dr. BARLOW thought that the specimens in the museums showing union of vertebræ by means of splints of bone, chiefly in front and at the sides, which kept the spinal column nearly straight, were of a different nature from those cases of spondylitis deformans where there was arching backwards of the dorsal spine with considerable curvature. He had seen four typical cases of spondylitis deformans. One was that of a volunteer, aged twenty-six, who had got damp and had severe backache after camping out; his height was diminished by five inches; the patient committed suicide owing to the intensity of the pains. In two other cases occurring in individuals aged about forty, gonorrhœa in one, and acute rheumatism in the other, preceded the spondylitis deformans, which was also associated with rheumatic arthritis. He had seen another case of spondylitis deformans where no signs of osteo-arthritis were present. The plaster jacket produced no benefit in either of the two cases in which it was used.—Mr. J. BLAND SUTTON said that he had seen changes in the spinal vertebræ of a camel exactly resembling those seen in man. Large masses of bone ankylosed the vertebræ together. There was no difference between the osteo-arthritic changes in man and those seen in animals. The extinct great Irish elk was a witness to the antiquity of the disease.—Mr. DAVIES-COLLEY, in reply, considered that the disease in old people was different from that in the young. He did not agree with the suggestion of Dr. Goodhart that there was paralysis of the muscles supporting the spine.

Mr. BILTON POLLARD showed sections and drawings of a specimen of Epithelioma of the Upper Jaw removed by Mr. Christopher Heath, at University College Hospital, in October last. The patient was a man aged sixty. He had received a severe blow on the right cheek eight years previously. Nine months before admission his nose began to bleed on the right side, and three months later the right cheek began to swell, and later the right nostril became blocked. On admission a swelling of the right cheek was observed, but the skin over it was not implicated. The hard palate was bulged close to the alveolus on the affected side; there was no sinus between the mouth and antrum; the teeth were sound, and the alveolus healthy. There was no enlargement of the lymphatic glands, and no family history of new growths. At the operation the growth was found to fill the antrum, right nasal fossa, and sphenoidal sinus. The patient made a good recovery, and left the hospital in four weeks. The growth was greyish-white in colour and of firmish consistence, with bands of denser tissue running through it. The greater part was composed of tubes of small cells ramifying through a hyaline and finely fibrillated stroma; the tubes anastomosed freely, and islets of colloid degeneration were scattered within them; the tubes were without lumina. Here and there cells of a larger size were seen, evidently of epithelial type. The stroma was really composed of spindle-shaped cells. The tumour had

alliances with the plexiform sarcoma of Billroth, but was much more like the tubular epithelioma of Cornil and Ranvier. Clinically, the tumour had resemblances to the "boring epithelioma" of M. Reclus[1] and to those cases shown by Mr. Butlin in 1881.

Dr. CARRINGTON read for Mr. Lane a paper on Suppuration in many of the Joints of an Infant eight weeks old, who had had specific eruption all over the body and snuffles. There was much emaciation. Treatment was effected by mercury and stimulants without result. During life only the left elbow-joint was swollen. At the autopsy suppuration was found in the right hip and right shoulder and both elbows; these were distended with pus. The ribs were markedly beaded; there was no softening to be detected between the epiphysis and diaphysis. The changes were most marked about the humerus and ulna of the right elbow. No suppuration in the thymus was found. A firm yellowish-pink coloured gumma was seen in the upper lobe of the right lung, and in the liver there were one or two whitish patches of doubtful nature. The case seemed to be rare and unlike those described by M. Parrot. One recorded by Dr. Lees in the Clinical Transactions for 1880 was nearly allied to it.

The following card specimens were shown:—Dr. Charlewood Turner: Horseshoe Kidney and Sarcoma of both Adrenals. Mr. John Poland: Suppurating Bronchial Gland opening into the Œsophagus and Left Bronchus. Dr. Norman Moore: (1) Disease of Sacro-iliac Joint following Parturition; (2) Renal Tumour composed of Cholesterin; (3) Aneurysm of the Anterior Aortic Valve. Mr. M. Sheild: Rectal Polypus. Two recent specimens were shown:—Mr. M. Sheild: Morbid Growths, probably Gummata, in the Liver of a Woman, aged twenty-four. Mr. Battle: Cyst containing Creamy Fluid, removed by Mr. Sydney Jones from the intestinal wall of a woman, aged twenty-five.

[1] Progrès Médical, 1876.

EPIDEMIOLOGICAL SOCIETY OF LONDON.

A MEETING of this Society was held on Jan. 14th, Sir Joseph Fayrer, K.C.S.I., M.D., Vice-President, in the chair.

Surgeon-General MOORE read a paper on the Constitutional Requirements for Tropical Climates, with special reference to Temperaments. After remarking that in former times more attention was paid to temperament than is now the case, the author proceeded to prove by reference to the "Vedas" that the Aryans when they descended into India, 5000 years B.C., were white in colour; their habits and constitutions being then adapted to a northern climate. But the influence of warm climates impresses certain peculiarities on those who inhabit them. Exposure to the heat of a tropical climate tends to bronze the white skin; unless the possessor unfortunately becomes subject to that slow blight of the constitutional powers manifested by a diminution of red blood-corpuscles, in which case the skin is blanched. Then there is a positive diminution of inspired oxygen, owing first to the expansion of the air from heat, and secondly to the lessened number and force of respirations, consequent on the lassitude experienced and on the smaller amount of physical exertion taken in the tropics, where actual necessaries in the shape of food are produced under the minimum of labour. Doubtless, the Aryan Hindoos, once meat-eaters, left off consuming flesh as a desideratum of residence in a hot climate, and probably as a presumed means of maintaining the white skin on which they prided themselves. The Brahmins, who wrote the "Vedas," must have been intellectually capable of appreciating the evil of too much carbonaceous food in a tropical country, although not reasoning the matter out by the light of nineteenth-century science. However this may be, there is no doubt that the Aryans, once white, with northern temperaments and habits, have, during the lapse of ages, by the survival of the fittest, been converted into the modern Hindoo, with his typical temperament, which may be regarded as a compound of the nervous and bilious, and in which all the inhabitants of Hindoostan, whether Aborigines, Hindoos, or Mahomedans, partake; and when we recollect that in one or two generations Celts and Saxons, Teutons and Danes, *cum multis aliis*, are converted into the sallow typical inevitable Yankee, the change during thousands of years of the light Aryan into the dark Hindoo seems facile. Now, theoretically, it would appear that the European, who in type and temperament most closely resembles the natives of India, would be best fitted to encounter the adverse influences of a tropical climate; and, practically, this appears to be the case, as Europeans marked by the bilious or bilio-nervous temperament usually enjoy the best health in India. The term bilious is a misnomer, as implying in persons of that temperament a tendency to hepatic derangement which does not exist in any extraordinary degree; the bilious appearance depending on a participation in that cutaneous deposit of carbon marking the dark races. But there must be no predominance of the nervous temperament, as a highly sensitive and sympathetic nature is not most conducive to health and happiness, when submitted to the daily ills and irritations of tropical life. A French physiologist is credited with saying that "If you want long life, you should possess a bad heart and a good stomach." Without endorsing this assertion, it may be stated, with certainty, that a highly nervous organisation, especially if, as is often the case, associated with feeble digestion, is not fitted for prolonged tropical residence. The temperament next best fitted for the tropics is the sanguine, perhaps explainable by the somewhat less liability of individuals of this type to tropical anæmia. But, on the other hand, there is tendency to hepatic affection, and the sanguine temperament enduring only for a period may rapidly or suddenly give way. The longer, however, persons of sanguine temperament live in India, the more decided is the change which takes place towards the bilious variety, explainable by a consideration of the general effect of a tropical climate on the system of the European, which is much the same as that converting the ancient Aryan into the modern Hindoo. Discarding such hypothetical causes as marsh miasmata and telluric influences, the author gave reasons for regarding *heat* as the principal factor in producing the changes, so often of a deteriorating nature, which take place in the system of the European sojourning in the tropics. Thus, temperaments become associated with acquired diatheses—as the scorbutic, the malarious, and the syphilitic, all of which should forbid tropical residence. The latent scorbutic taint is extremely prevalent in India, and as there is a pathological resemblance between gout and scurvy, the system tainted by the latter is extremely like to develop the former, and therefore hereditary tendency to gout should be regarded as against the advisability of a tropical career. Again, an hereditary tendency to hæmorrhage should be similarly regarded; for bleeding from the nose and gums being the ordinary manifestations of the hæmorrhagic diathesis, and also of malarious and scorbutic taints, it is easy to conceive how the latter, being established, may excite the dormant diathesis of the former. Hereditary tendency to insanity or epilepsy should also unfit for tropical residence, both of which are liable to be excited by heat. There is another malady which, although not regarded as hereditary, should unfit for tropical residence, and that is albuminuria. Years back hot climates were regarded as favourable for the first stage of renal affections. Experience, however, has proved that tropical countries should be forbidden to all who have passed albumen, unless from accidental causes. Idiosyncrasy, especially when it shows itself in an inability to take quinine, should unfit for Indian life. So should the deadly fear of disease, which causes some people to see danger everywhere, and, like Voltaire, to regard the atmosphere as "a blue and white mass of noxious exhalations." Age and sex are important considerations. Persons possessing the suitable temperament may proceed at a younger and remain till a later age than those of opposite temperament. The period at which officers are required to vacate active employment in the public services is fifty-five, which even in India is too early. For it must be recollected that such men represent the survival of the fittest, men who supported the burden of the day under which so many comrades succumbed, and who may therefore be credited with more than the average *vis vitæ*, with prudence of life, and with the suitable temperament. As regards sex, it was observed that, if it is desirable that males should not proceed to the tropics before the growth of the body is matured, it is especially desirable that females should not do so until the growth is matured, and the periodical functions are firmly established. Dr. Moore concluded his paper by lamenting the absence of ordinary care evinced for themselves by Europeans generally in India. In the discussion which followed Sir Joseph Fayrer, Surgeons-General Manifold and Comyn, Drs. Lawson, Dickson, and Dow took part.

MEDICAL OFFICERS OF HEALTH SOCIETY.

AT a meeting of this Society held on Dec. 19th, 1884,

Mr. HENRY ARMSTRONG read a paper on the Status of the Medical Officer of Health as a Criterion of Sanitary Progress, The author remarked as follows:—A correct idea of the public desire for sanitary progress is to be formed by the position accorded to medical officers of health. In the present state of opinion the post of a health officer is one of devotion and self-sacrifice without adequate return. He is doing good work and his action is approved at head quarters, but the feeling among health officers in general is one of disappointment with their position. The causes of dissatisfaction are external and internal to the body of officers of health. The former include the anomalies of sanitary districts as regards area and population to be supervised, the amount of attention to be bestowed on his district by the officer, the terms of appointment, irregularities of remuneration in different districts, and smallness of salary as compared with other public professional officers, want of proper consideration for the office and officer on the part of local authorities, as shown by their treatment of his advice (reports, &c.) and the amount of authority given him; opposition between the health officer and the inspector of nuisances, sometimes promoted; the personal relations existing between the health officer and individual members of his authority; his remuneration is generally inadequate, and he is sometimes tempted to take other and even unprofessional duties to eke out a slender income. His salary in many instances is liable to reduction, generally owing to the short period for which he is engaged; he is exposed to frequently recurring risk of loss of office without cause on his part; he has no prospect of pension with advancing age, and his relations with the public are difficult. Duty brings him into conflict with private interests. He does not receive sufficient support from those in authority. Internally, the causes of dissatisfaction are, among others, that medical men accept appointments at unfairly low rates of remuneration and without due regard to the responsibilities of the duty they undertake to discharge. The foregoing circumstances react on each other, both on the part of the public and the practitioner; the cause of sanitation, and, *pari passu*, the status of the officer practising it, suffer. The status of officers of health may be improved (1) by equalising the health appointments through compulsory combination of small districts, and by appointing superintendent medical officers of health over entire counties or groups of counties; (2) by the Local Government Board exercising more control over the appointments and duties of officers; (3) by local sanitary authorities being deprived of the option of ignoring the sound advice of their health officers; (4) by extending the authority of health officers; (5) by making his recompense and prospects equal to those of other professional men on his own level; (6) by giving the officer satisfactory tenure of his appointment. The holding of health appointments by private, general, or consulting practitioners is not desirable. The salaries of the appointments should be sufficient to render such a mode of increasing the income unattractive. The officer may with advantage hold certain other public appointments relating to hygiene—e.g., those of medical superintendent to a hospital for infectious diseases, coroner, public vaccinator, superintendent, registrar of births and deaths, lecturer on hygiene at a medical school, examiner for university degrees in sanitary science. He may also under certain circumstances act as public analyst if he has received proper and sufficient training for that office, and if he has assistance so as to prevent the work from interfering with his other duties. He should not accept such offices as superintendent of scavenging, inspector of nuisances, veterinary inspector, &c. The intending medical officer of health of the future should undergo a term of pupilage and assistancy with a health officer, and before applying for full appointment should be able to produce a distinctive sanitary diploma or degree, such as that of Doctor or Bachelor in Hygiene, by examination after completion of a recognised curriculum. The paper concluded by recommending that the questions raised be referred to the Council for their report with the view of practical action being taken by the Society.—In the discussion which followed, the President, Drs. Gibbon, Walford, Saunders, Seaton, and Bate, and Messrs. Jacobs, Furnivall, Blyth, and Hartt took part.

WOLVERHAMPTON DISTRICT MEDICAL SOCIETY.

AT the meeting of the above Society, held on Jan. 8th at Wolverhampton,

Mr. VINCENT JACKSON read a paper on a Cheap and Ready way of Treating Club-foot. Having given an able and interesting summary of the history of the subject, which dated from 1837, he enumerated the varieties of the deformity and divided the treatment into operative, manipulative, and mechanical. For the latter purpose he strongly recommended the use of plaster-of-Paris, as being far cheaper and quite as effectual as the more costly special instruments. Mr. Jackson then demonstrated his mode of procedure.

Mr. A. E. CHESSHIRE read a communication on the Value of Cocaine as a Local Anæsthetic for Operations on the Eye, and stated that he had used it in forty cases, and found that it abolished or so lessened pain that most ophthalmic operations could be performed with comfort both to the patient and to the operator. He used a 5 per cent. solution applied every five minutes.

Mr. JACKSON exhibited a specimen of an Aneurysm of the External Iliac Artery with ligature of that vessel, the patient having died in twenty-six hours from acute gangrene.

Dr. DINGLEY exhibited a specimen of Cancer of the Kidney, the chief interest of which was that no trace could be found of the other kidney. The renal artery, ureter, and vesiculæ seminalis were also missing, but there were two suprarenal bodies and two testicles. Also a specimen of a new growth in the liver, probably of a malignant character, and the intestines showing perforation, occurring in enteric fever.

In the discussion which followed the papers Dr. Lycett, Dr. C. R. Smith, and Mr. Jackson took part.

Reviews and Notices of Books.

Elementary Text-book of Zoology. General Part and Special Part: Protozoa to Insecta. By Dr. C. CLAUS, Professor of Zoology in the University of Vienna. Translated and Edited by ADAM SEDGWICK, M.A.; assisted by F. G. HEATHCOTE. With 706 Woodcuts; pp. 615. London: W. Swan Sonnenschein and Co. 1884.

THIS work, by a distinguished naturalist, represents the present state of zoological knowledge. It has been translated into French by M. G. Moquin Tandon, who has, moreover, made considerable additions to the original. We are glad to see it in an English dress, and, after having compared many passages with Claus' treatise, to give our testimony that Messrs. Adam Sedgwick and F. Heathcote's translation is executed with singular fidelity and idiomatic clearness. The general plan of the work is similar to that of Rymer Jones's treatise on the Animal Kingdom, a work that at the time it was written was a very good epitome of zoology. The general part, which extends to nearly 200 pages, discusses many subjects, however, which were not thought of in the days of Rymer Jones, and which are the outcome of modern research. Referring to the origin of life, Professor Claus speaks very cautiously, merely stating that in the present state of our knowledge there is no evidence to show that an independent abiogenetic generation (generatio æquivoca, or spontaneous generation) actually takes place even in the simplest and lowest forms of life, although very recently some investigations, as those of Pouchet, have led by the results of remarkable but equivocal experiments to the opposite view. "The existence of the generatio æquivoca," he observes, "would offer a very important service to our contention for the physico-chemical explanation; *it even appears to be a necessary postulate in order to explain the first appearance of organisms*," a statement that indicates the strong tendency which exists amongst many naturalists to refer the beginnings of life to purely natural causes. The "cell" is stated to consist of a small lump of a semi-fluid albuminous substance

(protoplasm), containing as a rule a dense or vesicular structure—the nucleus; which is frequently surrounded by a peripheral structureless membrane. In this definition the term albuminous seems open to question, since protoplasm does not present the chemical characters of albumen, and the nature of the nucleus might have been better given. It is interesting to read Professor Claus' definition of an animal. It is, he says, to be defined "as an organism provided with the power of free and voluntary movement, and with sensation, whose organs are internal, and are derived from a development of the internal surfaces of the body; which needs organic food, inspires oxygen, changes potential energy into kinetic, under the influence of oxidation processes in metabolism, and excretes carbonic acid and nitrogenous waste products."

A chapter is devoted to the organisation and development of animals in general, in which after the characters of cells and the tissues derived from cells have been considered, the subjects of correlation of organs, the structure and functions of the compound organs, development, the alternation of generations, polymorphism, and heterogamy are successively but briefly discussed. The fifth chapter is occupied with an account of the theory of natural selection, and the various evidence in favour of that of descent is given. All this part is so interesting, and places so well before the reader the concepts of modern biology, that it deserves to be studied, even by those who do not wish to follow the details of the structure of the different orders and families of animals that are subsequently given.

We venture to take one example of the mode in which a group of animals is treated by Professor Claus, and we select the "Trematoda" from the general interest they possess. Professor Claus defines them as "elongated and usually segmented Platyhelminthes without mouth or alimentary canal, with organs for attachment at the anterior extremity." He commences their description by pointing out that, whilst originally regarded as single animals, the view advanced by Steenstrupp that the proglottides must not be disregarded, and that whilst the individuality of the tapeworm may be justly insisted on, the subordinate and morphologically more restricted degree of individuality of the proglottis must also be admitted. A general description of the tapeworms follows, the characteristic features of the Bothriocephalus, Acanthobothrium, Tetrarhynchus, and Tænia being incidentally mentioned. The successive stages of development are then described, from the egg, through the embryo stage, and the formation of a vesicle which converts it into a bladder worm with one (Cysticercus) or several (Cœnurus) hollow buds, but still sexually immature animal. The bladder worm, it is then shown, entering the alimentary canal of another animal, loses its vesicle by the action of the digestive fluids, whilst the head or scolex, becoming free, gradually produces a chain of proglottides by a form of asexual production. The differential characters of the Tæniadæ and of the several families included under that name are then given. The account of the Cestoda is illustrated by fourteen woodcuts. The manner in which the volume is got up by Messrs. Sonnenschein reflects great credit upon them, the paper, the type, and the impressions of the very numerous and admirably illustrative drawings being alike excellent.

The Principles of Ventilation and Heating, and their Practical Application. By JOHN S. BILLINGS, M.D. Pp. 216. London: Trübner & Co. 1884.

THE author states the object of this work to be "to present the subject [of heating and ventilating buildings] in such a way that architects will appreciate its importance in their work—and understand its difficulties and the general principles which should guide them in endeavouring to overcome these difficulties—more fully than many of them seem to do at present." As might be anticipated of any work by Dr. Billings, it bears evidence of a careful study and practical knowledge of the subject. But it has been written chiefly with reference to conditions in the Northern States of America, and is therefore not so applicable as it might otherwise have been to this country. Of this Dr. Billings is well aware, for he observes: "The fact that good ventilation is expensive is not so well recognised as it should be, for the reason that much of our literature on the subject is furnished by English authors, who write with reference to the climate of England. This climate is very different from our own, being much more uniform. ..... In this country rooms must be kept at a temperature of from 68° to 70° F. to ensure the comfort of the occupants; while in England 60° F. seems to be the recognised standard. Open fireplaces and grates can therefore be used there more extensively than here, and in arranging apparatus for heating by indirect radiation it is necessary to provide more heating surface than is called for by the specification of English engineers." His remarks on the heating and ventilation of churches, theatres, and large public buildings deserve the careful consideration of architects and others entrusted with their plans and erection, for though great progress has of late been made, and some recent examples show how much may be done, it must be admitted that, as a rule, the condition of places for public assemblage is still capable of much improvement. He has devoted a chapter to the ventilation and heating of schools, of which he says that "of all classes of buildings in the United States, public or private, there are probably none which are in such an unsatisfactory condition as regards their ventilation." We doubt whether in this country the same remark might not be justly made, and we would recommend the subject to the notice of members of school boards, and of all who are interested in the welfare of the rising generation. The subject of the heating and ventilation of hospitals has received more than an average amount of attention from architects; but it is evident from the author's observations and his description of the methods adopted in various recently erected hospitals that there is still much room for improvement, both as regards efficiency and expense. We trust that Dr. Billings' work may receive the attention it deserves from architects and others in charge of or responsible for the construction of public buildings, feeling assured that it will tend to promote improvement in a direction in which it is much needed. The book is illustrated by woodcuts and has the advantage of an index, which might, perhaps, have been advantageously made more copious.

Plant Lore, Legends, and Lyrics. By R. FOLKARD, jun. London: Sampson Low, Marston, Searle, and Rivington. 1884.

FOLK-LORE has enjoyed a considerable amount of popular favour during the last few years, and numerous articles on the folk-lore of plants in particular have found their way not only into journals devoted to horticulture, but even into some of the leading daily newspapers. The volume under consideration is the result of an accumulation of material originally intended for a similar purpose, but which, owing to the discontinuance of the journal in which it would have been issued, is now published in the present form, with numerous additions and an excellent index. It will doubtless be found very much more convenient for reference in the form of a complete work, especially as it is now arranged, consisting in the first part of sixteen chapters under different headings, and in the second of the plants arranged in alphabetical order under their vernacular names. The first part contains a good deal that is of interest to students of the history of medicine and materia medica, particularly the chapters bearing the titles of "Plants

and the Planets," "The Doctrine of Signatures," "Magical Plants," "Plants of the Devil," &c. The work is got up in an attractive style, is illustrated with copies of quaint woodcuts from old herbals and books of travels, and forms a very suitable book for a birthday gift to anyone interested in plants and their uses. The book bears evidence of careful revision, being unusually free from typographical errors. In a few cases, however, the botanical names, especially those of a specific character, have been omitted. The very natural error of confounding the pita or Mexican aloe (Agave Americana) with the Barbadoes aloe (Aloe vulgaris) is one of the very few botanical errors noticeable.

Diseases and Injuries of the Eye. By GEORGE LAWSON, F.R.C.S., &c. Fifth Edition. London: Renshaw. 1885.

THE issue of a fifth edition of this excellent work is testimony to its sustained popularity. In preparing a new edition Mr. Lawson has spared no pains to make his work representative of the best contemporary knowledge. Many articles have been rewritten, and several new subjects have been added. Indeed, every page shows evidence of conscientious revision. With the fullest confidence we can continue to recommend Mr. Lawson's manual, in spite of many rivals, as in most respects the best in our language, whether for the student or for the practitioner.

Street's Indian and Colonial Mercantile Directory, 1884-85. London: Street and Co.

WE have received a copy of the tenth issue of this work, which is calculated to prove of immense advantage to all who have business connexion with any or all of England's foreign possessions. It contains trade returns, tariffs, populations, and full particulars of the steam and other communications with the various places treated of; the leading merchants, traders of every class, and professional men are fully enumerated. A concise description of each county and town is furnished, along with a list of the principal products. As in previous years, maps are in this issue given of all the principal countries mentioned in the letterpress, and particulars of the various railways in operation, or in course of construction, are supplied where practicable.

New Inventions.

HAGEDORN'S SURGICAL NEEDLES AND NEEDLE-HOLDER.

MESSRS. KROHNE & SESEMANN have submitted to us some excellent surgical needles and a very convenient needle-holder, which have been devised by Dr. Hagedorn of Magdeburg. The needles are semicircular in shape, the

section of the stem being an oblong parallelogram of the same thickness throughout its length. The point has a single cutting edge on its convex surface. The advantages which these needles have over the curved needles in general use are that the puncture they make is a fine slit at right angles with the edge of the wound to be united and therefore when the suture is tightened the edges of the puncture are approximated, not made to gape; the puncture of the needle is also at right angles to the surface of the wound, and the suture approximates the whole thickness of the parts through which it is passed with equal tension; and the needles are stronger and much less liable to break when held in a holder than those in common use. The needle-holder is very simple in construction; it grasps the flat surfaces of the needle, and can seize and hold the point as securely as any part of the stem. The jaws are closed with a lever handle, which can be fixed by a ratchet. For special purposes these holders are made of different lengths and shapes, but anyone who will use them will soon be convinced of their great convenience and merit.

THE METROPOLITAN ASYLUMS BOARD.

A REPORT, dealing with the operations of the Metropolitan Asylums Board, has been recently issued. This is the first time that any attempt has been made to bring the whole work of this body into one view, and the handbook commences with an account of the provision made for the care of harmless lunatics. The first asylum founded was that at Leavesden, near Watford, and the whole cost of the asylum's buildings, and the land on which it stands, upwards of eighty acres, a farm being worked in connexion with the asylum, is set down at £177,818. The accommodation provided is for 1100 females and 900 males, the cost being £88 16*s.* a bed. The sister asylum at Caterham stands in the midst of 154 acres, and the expenditure upon that asylum up to date has been £192,382. This asylum provides for 2050 patients—namely, 1150 females and 900 males. The third and fourth asylums for this class of patients are at Darenth, in Kent, where, for the imbecile classes alone, the managers have acquired 173 acres. One asylum here is for imbecile children. There are upwards of 600 children in this asylum, many of them hopeless idiots, but some capable of being trained into work of a useful character. The second asylum is for adults, and there are now 900 of the same character of patients as fill the Leavesden and Caterham asylums. The cost of the asylums and lands at Darenth was £247,951. Thus, in all the Board has about 5500 imbecile patients under its care. The provision for fever includes five asylums, which find beds for 951 patients, and provision is being made for 512 convalescent patients at Winchmore-hill, where the land has been acquired, and the building of the asylum is proceeding. The Eastern Homerton Fever Asylum cost, for land and buildings, £87,772, and provides 300 beds for fever. The South-Western Asylum, Stockwell, which provides 228 beds for fever, cost on the whole £104,094, and additional works are being carried out now to the cost of £2000. The North-Western Asylum (the Hampstead Hospital) cost £54,820, and there has been additional expenditure of late to the sum of £3200. The asylum has 150 beds for fever patients, and a few beds for such severe small-pox cases as arise in the district. The Western (Fulham) Asylum, which affords 90 beds for fever cases, cost £64,257, and further expenditure is being incurred. At the South-Eastern Asylum (New Cross-road) there has been an expenditure of £70,835, and accommodation is provided for 150 fever patients. In each of these asylums a limited number of beds is provided for the reception of small-pox patients.

The provision for small-pox, apart from the other asylums, has been of a very complete character. Accommodation has been provided for 1600 patients to be treated at one time, the hospital ships, the camp at Darenth, the Plaistow hospital, and five other places being used for the purpose in the emergency. The ships have cost £28,129, the ambulance station in the east of London has cost £10,552, the Darenth camp has cost £34,561 in establishing and £50,942 in maintaining, the Plaistow asylum has cost £4692, the ambulance steamers and wharves have cost £6173, the south-eastern ambulance station has cost £4661, and the western one, exclusive of construction, has cost £3961. The report concludes with a statement of the work done in connexion with the *Ermouth* training ship and a complete account of the expenditure, the cost of the patients in the various asylums being given in detail.

THE LANCET.

LONDON: SATURDAY, JANUARY 24, 1885.

LAST week we published an account of the meeting of the Medical Society, at which Dr. HERON showed the differences between cultivations of Dr. KOCH's comma bacillus of Asiatic cholera and Drs. FINKLER and PRION's bacillus of cholera nostras. It will be remembered that the most striking of these differences lay in the fact that whereas KOCH's organism liquefied nutrient gelatine but slowly, that of FINKLER and PRION did so rapidly and extensively, so that whilst in the case of the latter the track made in the gelatine by a platinum wire used for inoculation was in the course of a few days wide and stocking-like, in the case of Dr. KOCH's organism it presented the appearance of a mere thread. The value of this diagnostic mark of the comma bacillus of cholera has, however, been very materially diminished by the publication within the last few days, in BÖRNER'S *Medicinische Wochenschrift*, of a very carefully drawn up account of the discovery by Dr. DENEKE, of the Hygienic Institute at Göttingen, of a comma-shaped organism in some stale cheese. Dr. DENEKE instituted careful comparisons between the commas which he thus found and those of KOCH on the one hand, and of FINKLER and PRION on the other, and found that "as regards its morphological characters as well as its mode of growth in, and action upon, nutrient gelatine, the cheese comma approximated much more closely to the bacillus of cholera than to the other." A minute account is given of its microscopical characters, of its mode of growth in meat broth and in gelatinised material in test tubes, and also when spread out on glass plates, but as this agrees in most particulars with the accounts which have already been frequently published concerning the cholera microbe, it is not necessary to reproduce it here in its entirety.

It is mentioned that in the earlier stages of growth the "colonies" of these cheese commas appear to the naked eye very like those of the cholera commas, but that under a power of one hundred diameters some slight differences may be detected. In test-tube cultivations in gelatine the resemblance is stated to be still closer, and "it is often difficult to distinguish cultivations of the cheese bacillus in the earlier stages from those of the choleraic bacillus in a somewhat more advanced stage." As in the case of KOCH's bacillus, the growth along the track of the inoculating wire is thread-like, though somewhat wider, and the upper part of the funnel-shaped cultivation is similarly characterised by the development of an air vesicle. Dr. DENEKE did not succeed in developing his commas on potatoes, but he found that when cultivated in agar-agar, and in solidified blood-serum, no distinction could be made between them and those of cholera, or of cholera nostras, either as regards their mode of growth, or their action on the medium. Dr. DENEKE, however, considers the cheese organism to be physiologically distinct from that of cholera, although he appears to base, perhaps, his chief conclusion that this is so on the results of some experiments on animals. Following the example of MM. NICATI and RIETSCH, he introduced a small quantity of the cheese commas directly into the duodenum of two guinea-pigs, as also a small quantity of a cultivation of choleraic commas into the duodenum of two other guinea-pigs. The two animals of the former experiment recovered, the two of the latter died; but it is added that as one of these guinea-pigs succumbed within six hours (consequently before it could reasonably be expected that the microbes could have manifested their assumed virulent properties), and also because a portion of the material introduced had escaped into the peritoneal cavity, it is not claimed that this experiment proved anything.

Judging from the very contradictory results which have from time to time been announced as a consequence of infecting animals with choleraic material, and judging also from the circumstance (to which we drew prominent attention a short time ago) that Dr. EMMERICH of Munich had succeeded in producing cholera-like pathological lesions by means of a totally different microbe, no great importance can be attached to the death of the other guinea-pig referred to by Dr. DENEKE. It is, however, clearly manifest that he has drawn attention to an organism which, both morphologically and physiologically, very closely resembles the comma bacillus of cholera, even if it be not absolutely identical with it.

The importance of the observations is materially enhanced by the fact of the microbe having been detected in one of the ordinary articles of our food; it must therefore presumably be more or less constantly introduced into the alimentary canal. It is now well known that organisms of a similar type are frequently present in the mouth in health, but, strange to say, it would appear that they are by no means to be so readily detected in normal alvine secretions. It is possible that during *health* the action of the juices of the mouth and stomach is inimical to their further development; as indeed appears to be the case with Dr. KOCH's comma microbe, seeing that it does not develop in the intestines of animals when administered by the mouth, and hence the necessity which has arisen for introducing it directly into the duodenum for experimental purposes. This is a phase of the question which Dr. KOCH and his supporters have completely ignored when comparing the physiological properties of various comma-shaped bacilli. It is already abundantly manifest that organisms of this character are by no means so restricted in their distribution as was supposed at the time when one of the tribe was fixed upon as being the cause of cholera. Much has been learnt since then, but there is still much to be done; and workers in this field of research may rest assured that every addition which they make to our knowledge of these curved microbes will be warmly welcomed at the present time, not only by the profession but also by the public at large.

INFLAMMATION, in itself a purely mechanical derangement of the circulation, presents many varieties, in which its basal type of action is more or less altered and complicated by the advent of contagion. These lie, one may say, upon the borderland between local and communicable dis-

ease, and present examples of the passage of one form into the other, so that we have come to talk of inflammation as affording a nidus for septic development. The cases of a common cold, of "idiopathic" erysipelas, of simple and rheumatic tonsillitis, might all be quoted in illustration. Treatment is necessarily much affected by these considerations. One finds that one has to deal not only with an obvious effect which is actively destructive of the tissues which it implicates, not only with so much of mechanical causation as this represents, but with a further more subtle cause, a "germ," which is at least the vehicle of a still more remote and perhaps original stimulus. Sometimes it would seem that the cause had been overwhelmed by the created morbid action—that is, that the implanted poison, if not rendered inert, had been largely supplanted in importance by the tissue irritation to which it gave rise. There is reason to doubt whether in such a case its primary force has been greater than that of mere mechanical irritation. In other instances, it lives, multiplies its power, and works, destructive but indestructible, exhibiting all the characters of sustained malignancy, in addition to being readily transferable by contact from one subject to another. The former group of symptoms exemplifies the meaning of the old term "inflammation," the name of a result; the latter we take to be commanded and absorbed by its cause, and we call it "septic disease." Yet among the milder cases not credited with contagious properties one finds examples of transference of the disease between associated persons, as also, probably, in the undoubtedly malignant class, instances of contact without such transference. These facts show that the borderland of infection to which we have referred is a fairly wide one, presenting degrees of risk. They also give some colour to the opinion that there has been an evolution in its history in the direction of aggressiveness, and that bacilli and spores are, without distinction, media of transit rather than the sole causes of the infectious properties. The treatment of ophthalmia may serve to indicate the bearing of these points in pathology on therapeutics. In the various forms of this disease there are grades of contagion and of virulence. Even the comparatively innocent catarrh, which is not usually regarded as being contagious, seems occasionally to assume a severer form, and is communicated to the healthy eye, just as the action of eczema is sometimes engrafted on a sound skin. The ophthalmia of infants, the much more destructive and poisonous purulent form seen in adults, and the gonorrhœal variety also show ascending series of infectiousness. It will be said that for the latter varieties a special germ is active in each case. There is room to doubt, nevertheless, how far the differences attributed to these are peculiar to themselves, and whether they are not of degree only, rather than of kind. In any case, it is a characteristic of this class of disease that the basal inflammatory change continues the most prominent feature. The uniform efficiency of nitrate of silver is a proof of this. The germ, whatever it may be, is extinguished by a drug directed against the mechanical changes it has caused. This very remedy, moreover, has little or no repute where septic poisoning is the predominant evil. It cannot control the rapid tissue infection then apparent. Ocular diphtheria does not benefit by it, but antiseptic measures are here everything. Thus we seem to pass by stages along one morbid process from states of weak infectiveness but high local irritability, to others allied in type but highly contagious. Treatment must follow a corresponding course, and its results furnish in themselves, we cannot but think, a guide to the true pathology.

WE not unfrequently receive inquiries as to whether a medical officer of health should or should not be allowed to remain in private practice. One such inquiry we answered briefly in our last week's issue; but the subject is again urged upon us in another form. On the question generally, we have no hesitation in saying that under ordinary circumstances we should prefer to see medical officers of health independent of private practice; but, as matters now stand, we are quite certain that the universal application of this rule would in many parts of the country be distinctly prejudicial to the interests of public health. In the first place, the number of medical men who have by examination and otherwise fitted themselves for holding the post of officer of health is by no means large, and so long as this is the case it is better that towns and districts be officered by men of ample experience in the various branches of their profession, and who are still in practice, rather than by others who are less competent, but who would be willing to give their whole time to their official duties. Then, again, there are officers of health who, though in practice, are unquestionably competent to discharge the duties pertaining to the post they occupy, and whom we should be sorry to see replaced merely in order that they might be succeeded by others who have seen little or no practice, and who intend altogether to discard the ordinary work of their profession. There is a further point which we think of even greater importance. We hold that no district, whether urban or rural, has a right to demand the entire services of a competent officer of health unless it is prepared to guarantee a salary sufficient for the payment of such services; and we have occasionally seen with regret that some medical men, in their desire to get a footing in the sanitary service of the country, have undertaken to give themselves wholly to sanitary work at salaries which they should have regarded as hardly ample to command their services for more than one or two days in the week. Some districts, again, are either too small or too sparsely populated to give occupation to an officer who has no other professional calls upon his time, and in such districts private practice, within certain limitations, may be useful both to the officer and to the district which he serves. But where an adequate salary can be ensured we feel strongly that the ordinary practitioner is likely to find himself hindered in his work as health officer, both by the calls which in practice are made upon his time, and by the difficulties which he will experience in dealing impartially in his official capacity with those upon whom he is also dependent in his practice. When, after a lapse of some years, there shall be a sufficient number of properly trained practitioners to fill the many posts of officer of health, we shall hope to see most districts officered by those who are independent of practice; and where districts are not in themselves capable of paying such salaries as should command the entire services of a skilled officer, we trust that the authorities may in advance combine with adjoining districts, so that they

may collectively offer a proper remuneration for the services they require. Until such a time arrives each case will have to be judged on its merits.

IN the December number of the *Revue de Chirurgie* is a translation of a Russian paper by Dr. SKLEFASSOWSKY, in which he relates the case of a man on whom he has performed an osteoplastic operation first devised and practised by Dr. WLADIMIROFF of Kazan, by whose name it may perhaps best be known. The operation consists in the removal of the posterior part of the foot and the ankle-joint and the union of the anterior part of the foot to the leg, so that the foot is in a line with the leg, and the patient subsequently walks upon the heads of the metatarsal bones and the fully extended toes. The method of procedure is as follows:—An incision is made straight across the sole on a level with the middle of the scaphoid bone; on each side this incision is continued up to the malleolus, and then straight across the back of the ankle. The incisions are all carried down to the bone, and the ankle-joint is entered from behind and disarticulated. This done, the heel is seized, and the soft parts of the dorsum of the foot are carefully separated from the bones, care being taken not to expose or injure the dorsal artery of the foot. The transverse tarsal joint is now to be opened and disarticulated, and the os calcis and astragalus removed. The articular surfaces of the cuboid and scaphoid, and the lower ends of the tibia and fibula, are to be sawn off, and the foot is then to be applied to the end of the leg, and first the bones, then the soft parts, united with sutures.

The advantages claimed for this operation are, that while permitting of the removal of diseased parts it preserves healthy structures, and is not such a mutilation as is a SYME'S or PIROGOFF'S amputation, or an amputation through the lower third of the leg. The result is stated not to be a great deformity, the line of the limb is preserved, and the foot forms an excellent basis of support. The cases for which it is suitable are intractable ulcers of the heel, disease of the tarsus limited to the os calcis and astragalus, and new growths similarly limited. SKLEFASSOWSKY performed the operation for a very chronic ulcer of the heel, which had resisted all treatment for nine years, and which invalided and crippled an otherwise robust man. PIROGOFF'S amputation is usually rejected for cases of strumous disease of the ankle or posterior tarsus on account of the liability to recurrence of the disease in the stump, and at first sight it might appear that WLADIMIROFF'S operation lies open to the same objection. But the cases are not quite parallel. In PIROGOFF'S amputation part of the os calcis is preserved, and this very bone may have been involved in the primary disease. In the latter operation the os calcis and astragalus are completely and wholly removed; these are the bones which are the most frequent seats of strumous and tubercular disease, and it is a common occurrence to see chronic destructive changes in them, or involving the ankle-joint, which disable but do not otherwise injure the anterior part of the foot. For suitable cases the operation is certainly worthy of being carefully tested. SKLEFASSOWSKY'S patient had shortening to the extent of one centimetre only, which is quite an insignificant amount.

Annotations.

"Ne quid nimis."

THE CASE OF DR. BRADLEY.

AT the last November assizes, David Bradley, M.D., formerly practising at Brimmington, Derbyshire, was convicted of having attempted to commit a rape upon Eliza Swetmore, the wife of a collier. The indictment included the more serious offence, but the jury found the prisoner guilty on the minor charge only. The prosecutrix, who admitted she had been the subject of epileptic fits since she was eleven years of age, and that her father had been confined in a lunatic asylum, deposed as follows:—She went to the surgery of the prisoner for some medicine, and whilst there he had carnal knowledge of her against her will, both whilst she was on two chairs, and again on the floor. She further stated that she resisted with all her might, and that she cried out, "Oh, doctor, don't." The latter assertion was corroborated by the housekeeper of the accused, and there seems no reason to doubt its accuracy. After the alleged rape she went immediately to the house of a neighbour, and complained of the assault. When Dr. Bradley was taxed with the offence, he said the prosecutrix had had a fit; at the same time he informed his housekeeper of the charge made against him. It transpired during the hearing before the magistrate that the surgery-door opened on to the street, and that the only indication of a struggle on the part of the deceased was that her neckerchief was off, and there was a small indentation on her neck. Dr. Palmer, who examined her the same evening, found no signs of the specific offence, but is said to have given it as his opinion that an epileptic fit would not be recovered from within half an hour, whereas the alleged assault did not occupy more than five minutes, after which the woman walked unaided out of the surgery. No evidence was forthcoming of injury or marks on Dr. Bradley's person or dress. The Lord Chief Justice, who tried the case, and concurred in the verdict, remarked, when charging the grand jury, that "the woman's statement was curious," but he seems to have been impressed with the calm and unbiased manner with which Mrs. Swetmore gave her evidence at the trial, and this he said was a great deal in her favour. He further dwelt on the fact that the counsel for the defence did not cross-examine the prosecutrix on her evidence-in-chief, as regards her statement that Dr. Bradley removed her hat when she went into the surgery, and let her leave the building when the proper thing—she being ill—was for her to remain in it. The last statement cuts both ways, for what would be more natural, if the crime had been committed, than that the accused should try to detain his victim in order to persuade her to consent to conceal his guilt. Again, with regard to the duration of an epileptic fit, every medical man knows that it may be momentary, or end only with the death of the subject. The removal of the woman's hat was the most likely thing to be done either by a doctor or a layman, as witness the daily treatment of fits in the streets. Assuming that a rape was neither committed nor attempted, what are the alternatives? Either the woman made the accusation *mala fide*, or she was impressed with the belief that she had been ravished, a belief albeit unfounded in fact. From a careful perusal of the depositions and a calm and deliberate investigation of the case in all its bearings, we are driven to the conclusion that the last hypothesis is the correct one. Persons of neurotic taint, especially those subject to perturbations of the feelings, and a general perversion of orderly innervation, such as is so often witnessed in epileptics, are liable to misinterpret their sensations in the direction of the one most prominent for the time being. If Mrs. Swetmore's evidence is to be relied upon, we fail to see the justice of

the verdict. She swore positively that Dr. Bradley effected his purpose both on the chairs and on the floor, and yet the jury acquitted him on the major count of the indictment, finding him guilty only of the attempt. The evidence is to our minds perfectly consistent with the innocence of the convict, and we doubt not that had the court been aided with independent expert testimony, Dr. Bradley would not now be undergoing two years' imprisonment with hard labour. We understand that a petition to the Home Secretary is in course of preparation.

REMUNERATION OF MEDICAL OFFICERS OF HEALTH.

SOME time since we drew attention to the attempt that was being made by the Rural Sanitary Authority of Chesterfield to reduce the salary which Dr. Angus Mackintosh received in his capacity of medical officer of health, and we expressed a hope that, under the circumstances of the able and indefatigable services which Dr. Mackintosh had so long rendered to the district, the proposal would be resisted by the central authority. Fortunately, the Local Government Board announced the withdrawal of repayment of half the salary if the authority persisted in their intention. Notwithstanding this, however, and under the impression that they only had to show a bold face, the authority made the appointment at a reduced salary; but when, later on, they found they had really lost repayment of £200 a year, they rescinded their resolution, and Dr. Mackintosh continues at the original salary. It is promised that a similar attempt will again be made in March next, and it is to be hoped that both the Local Government Board and the officer of health will be firm in resisting it. The action of the Board is limited by the Public Health Act. The Board can refuse repayment, but they cannot refuse sanction if a properly qualified officer himself accepts a reduced salary which the authority are prepared to pay entirely out of the rates.

A MAGISTRATE'S OPINION ON MADNESS.

A CASE which has just occurred at Dungarvan, in which a woman about whose insanity the local magistrates were not sure, although the doctor was, on being remanded to the workhouse, attacked the inmates indiscriminately, and placed her own child on the fire, with the effect of burning it dangerously, will serve, and doubtless be utilised, to illustrate the sort of opinions which may be generally expected from magistrates if they are empowered to act as censors of medical certificates. We have not a particle of faith in the efficacy of this sort of lunacy reform. We do not understand how any member of the profession can support it. It seems an insult to the general body of practitioners to suppose that their written judgments would acquire greater value in consequence of the authority acquired by a formal process of attestation before a justice of the peace. We would not stoop to such a proposal. It assumes that which we emphatically deny—namely, that there is need of some measure like this to guard against the *mala fides* of certifiers. No such need exists. The reform we desire, and the only reform we could willingly accept as sufficient, is such a change in the law as would relieve the profession of the entirely non-medical and strictly legal duty of drawing up and signing documents which are warrants for imprisonment, and at the same time legal instruments of social disqualification and personal disability and disgrace. Let who will assert the contrary, we affirm that anyone and everyone who has been certified to be of unsound mind is permanently damaged in his or her own eyes and in those of the community. This injury ought not to be inflicted for the mere sake of treating a case of brain disturbance called "insanity," when no one in his senses even dreams of doing the same wrong to the character of a fellow-subject when he chances to be affected with that often far more formidable brain disturbance which is called "delirium." Laymen, albeit they hold Her Majesty's Commission of the Peace, cannot possibly be competent to decide on the medical issue, Is or is not a particular person insane? As well ask the local representative of Beadledom to diagnose a case of valvular disease of the heart. The notion of trusting the magistracy with such a duty is preposterous, and ought to be scouted as itself madness.

THE WAGES OF THE WORKING CLASSES.

IT is satisfactory to be told by so good an authority as Professor Leone Levi that the earnings of the working classes amount to £521,000,000 per annum, or, exclusive of food &c., £470,000,000; yielding an average of 32*s.* per week per family, assuming each family to have 2·17 earners. Comparing the earnings of the working classes for the year 1867 with those of 1884, there is an increase from £38 to £42 14*s.* With good health and good thrift the case of our working classes should not be so bad as it is. We may well believe with Professor Levi that in no other country are the working classes so well off. The next most important question is, How are the wages spent? It is useless to maintain that the answer to this question is satisfactory. Part of the unthrift is to be lightly condemned, but much of it is really culpable. The enormous amount spent on drink is not denied by any authority. It is said that while we as a nation spend on bread £70,000,000, on milk £30,000,000, on butter and cheese £25,000,000, on house rent £70,000,000, and on the rent of farms £60,000,000, we spend on alcoholic liquors £136,000,000. We want improvements in cooking for the working classes, so as to make the most of their food supplies. This is to be done partly by educating girls more practically, and partly by public arrangements. There is one thing on which the working classes spend far too little, and on which they will, when they are wiser, spend much more—that is, on good medical attendance, not only on themselves, but on their wives and children. Nothing would more conduce to their happiness than better arrangements for their health. The working man is often tempted to say, "How cheaply can I get medical advice?" One day he will say, either individually or as member of a club, "On what honourable and reasonable terms can I get a good and experienced medical adviser to take a personal interest in the health of myself and family over an extended time?" Professor Levi's figures show that there is nothing in the economic condition of the working classes to justify the low remuneration of medical men in some clubs, and the great extent of gratuitous medical service.

POPLITEAL ANEURYSM SIMULATING SARCOMA.

PROFESSOR SHEPHERD, of McGill University, relates in the current number of the *American Journal of the Medical Sciences* the case of a man aged forty-six, who was treated in 1875 for double popliteal aneurysm by compression. Two years later the small lump which had remained in the right ham began to enlarge and pulsate, and was again "cured by compression." In the summer of 1882 he again noticed a small hard tumour in the right ham, which did not pulsate, but gradually enlarged. When he came under treatment in December, 1883, there was a large indolent ulcer in the lower and outer side of the leg, and a tumour nearly the size of a man's head on the back of the thigh, which was immovable, smooth, inelastic, without pulsation, fluctuation, bruit, or thrill, and which was in no way influenced by compression of the femoral artery above it. Coursing over the

tumour were large veins, but there was no œdema of the leg. The inguinal glands were enlarged. Amputation of the thigh was performed, and on examination of the tumour it proved to be a mass of fibrin, not deposited in laminæ. The mass was solid throughout. At the lower part of the tumour its capsule was found to be continuous with the external coat of the artery, and about this point the clot was in a softer condition than elsewhere. The difficulties of diagnosis presented by this case seem to have been insuperable. Except for the fact that the man was known to have had a popliteal aneurysm which had relapsed, there was nothing to point to the correct diagnosis. From the description of the case there is no doubt that the treatment was the best that could have been suggested. No milder measures offered any prospect of cure; to attempt to excise the aneurysm would have probably led to a fatal result; and considering the presence of the large indolent ulcer of the leg, and that the sciatic nerve was tightly stretched over the tumour and considerably flattened, it is obvious that amputation was called for.

INSURANCE AND CHILD MORTALITY.

A REMARKABLE statement was lately made by Dr. Ritchie of Leek, respecting the rise in infant mortality since the practice of insuring the lives of children in their first year was introduced there. As at first reported, the mortality prior to this period was 15 per 1000, and rose during it to 170. Further evidence has shown that there is a clerical error in these figures, and that the excess in the death-rate consists in the difference between 156 and 186 per 1000. This materially alters the aspect of the case. Still, the excess, though not absolutely so great, is decided, and, inasmuch as it is constant, calls for explanation. How much of it is due to so-called natural causes, such as prevalent disease, to accidents, to local changes affecting public health during the period of operation of the insurance system, and how much, if any, is to be laid directly at the door of the latter? Of course it is impossible for us or anyone to give a ready answer to this question. What is required is a prolonged investigation which will aim at ascertaining the various possible causes of illness and death which might be held accountable, and the various degrees of their action, during, before, and after the time in question. We must probably allow, however, that some such comparison has been drawn before a statement so pointed as Dr. Ritchie's has been publicly made. A medical officer of health is in the best position for knowing the results of all conditions ordinarily affecting health and illness in his district. The institution of a further inquiry is, however, very desirable for many reasons. Without wishing to blacken the reputation of human nature, we cannot but admit that there is ample evidence to show that infant life is less respected than it ought to be. It is a life which is only too easily taken, the means by which this may be criminally accomplished are many, their discovery at times is very difficult, and conviction for crimes of this nature is in many cases impossible. Neglect alone will take this life, errors of judgment in management can be turned into errors of purpose for its extinction. Thus, bread and biscuit have killed many children. They are among the "farm" foods of infancy. It would certainly be most unfair to conclude that the poor are naturally less affectionate towards their children than the wealthy. It is equally beyond question that unnatural parents are found, and not seldom in that class, as in all others. Moreover, poverty with its associations brings temptations and longings which well-conditioned people can hardly estimate. Then we must remember the many children born, one may say, without father or mother in the full sense—the illegitimate class. Charity, public or parental, is not always careful to preserve these amongst us. They become the charge of underpaid nurses, and are too often brought up anyhow. Their living is rather permitted than desired. With these facts before us, the placing of a premium of several pounds on the life of an infant is clearly a measure which, however desirable in suitable cases, requires at least a shrewd supervision in its working in order that it may not become an incentive to crime in the ill-disposed.

HOSPITAL FOR INFECTIOUS DISEASES IN LIVERPOOL.

THE City Council at a recent meeting decided to apply to the Medical Institution for the opinion of the members as to the number of beds which should be provided in the new permanent hospital for infectious diseases. A special meeting of the institution was held on Tuesday, the 13th inst., when a report in substance as follows was adopted:—

"The institution, after a careful consideration of the subject, are of opinion that, if due regard be had to the size of the hospital wards, the necessities of non-epidemic years will be met by the provision of permanent accommodation for 300 patients suffering from infectious diseases other than small-pox. As to epidemic years, they are of opinion that the permanent hospital or hospitals, if it should be decided to build more than one, should be placed on a space of ground sufficiently large to admit of a rapid and economical extension of the accommodation by means of temporary sheds or such other structures as experience has shown to be efficient. With reference to small-pox, they are of opinion that, under rigidly enforced rules as to separate nursing and the visits of patients' friends, permanent provision might be made for forty cases in a building erected on the grounds of the fever hospital, but entirely dissociated from it, without risk either to the inmates of the fever hospital itself or to the inhabitants of the surrounding district. But for epidemic times it would be necessary, in case the tenancy of the Park Hill Estate should at any time be determined, that a large and sufficiently isolated space should be acquired, and that all but the severer cases should be conveyed to wards erected on it, the beds provided near the fever hospital or hospitals being reserved for those patients who should be deemed too ill to bear a more prolonged journey."

THE CULTIVATION OF SUGAR BEETS IN ENGLAND.

FOR many years past experiments have from time to time been made in England and Ireland on the cultivation of the sugar beet. In the present depressed condition of agriculture these experiments are of the highest importance, and we are glad to find that they appear to have been successful. We have received from Messrs. Bolton and Partners (Limited), of Westminster, a proof of the report of Professor Church on the results of the cultivation during the past year. This report, which carries great weight from the known integrity and high scientific fame of its author, represents the prospects of the industry in a very hopeful light. It appears easy with good management to get crops of fourteen tons to the acre of small beets, containing 14 per cent. of sugar. Such crops will, it is said, pay better than wheat, and that an extensive cultivation is possible is proved by the fact that we now pay £10,000,000 a year for foreign sugar. Professor Church believes, indeed, that as much as thirty tons per acre might be obtained in good years by close planting and with due care and sufficient manure. Of course it may be said that the hot summer of 1884 was the cause of the success, but the opinion of Professor Church is quite against this view; he regards the late crops as "by no means offering a series of exceptionally well-grown and rich roots." With the strontia process, which has of late been so largely adopted

in sugar manufacture, the free use of manures is possible, and will of course increase the crops. The report abounds with sound advice as to the management of the land and the crops, and we cannot but hope that the new industry may be a real help to the sore distressed British farmer. Any surplus roots may be used as cattle food, since, although lighter, they possess a higher nutritive value than mangolds.

A NEW PATHOLOGICAL SERIAL.

THE first part of a new publication devoted to pathology, and doubtless intended to be issued at intervals, like the volume which Professor Stricker sends out from Vienna, has just appeared (*Beiträge zur pathologischen Anatomie und Physiologie*, Erstes Heft. Jena: G. Fischer). It is edited by Professor Ziegler and his assistant at Tübingen, Dr. C. Nauwerck. This part opens with some contributions to the pathology of Bright's disease by the last-named writer, the portion of the monograph here published dealing in turn with the pathogenesis of Bright's disease, with Bright's disease in croupous pneumonia, with acute glomerulo-nephritis and acute nephritis in opium poisoning, and is in the main a histological study in which the views of other writers are freely criticised. A paper on the histogenesis of periosteal callus by Dr. E. Krafft follows, and one on the Biology of Mucor Corymbifer, by Armand Hückel. Dr. Mögling contributes the first portion of a monograph on the formation of the Hæmorrhagic Infarction, which is mainly devoted to a historical survey of the question of embolism, preliminary to the relation of the author's own studies on the subject. The appearance of this serial, which occupies ground already filled by Virchow's *Archiv*, shows how fertile is the field of pathological inquiry in Germany, and adds to our regret that as yet no similar publication has appeared in this country.

COCAINE IN DENTAL SURGERY.

WHEN cocaine was first introduced, both dental surgeons and their patients were very sanguine as to its value in reducing the excessive painfulness of operations in dentistry, and they hoped it could be used for allaying the sensitiveness of dentine when the caries was being excavated previous to "filling" the cavity. They also hoped it might be found useful to relieve the pain attending extraction of teeth and roots. The subject was introduced at the December meeting of the Odontological Society by Mr. Oakley Coles and Mr. S. J. Hutchinson; but their experience and that of the members present who joined in the discussion did not seem to point to any tangible results as to the effects of this drug. Most of those present agreed that in the 4 per cent. solution the action was almost inert on dentine, though it would relieve the sensitiveness of an exposed "pulp." Since then various experiments have been made with a 20 per cent. solution and with the hydrochlorate of cocaine in its crystalline form. The latter seems in a certain number of cases to produce a distinct abatement of *pain*, although *sensation* remains. It has been applied for the painless extraction of roots by damping a small piece of amadou, in size less than a pea, then dipping it in the crystals, painting the neck of the tooth and the gum around, and letting the crystals dissolve in the natural secretion, keeping away an excess of saliva with pads of lint or amadou. This has been found in a few minutes to deaden sensation sufficiently for the elevator and forceps to be used without much pain, although the patient was conscious of the sensation of the operation. More experience in the use of the drug, however, is required to warrant the conclusion that this concentrated application can safely be made without causing subsequent inflammation or sloughing. No record of its employment by submucous injection has come under our notice. It is possible that injecting a 4 per cent. solution on each side of the tooth to be extracted may produce sufficient local anæsthesia. This operation, however, has its drawbacks, as the very insertion of the needle would be dreaded almost as much as the extraction itself. In excavating the caries from a very sensitive tooth the 20 per cent. solution has produced very varying results, in some cases allaying the tenderness, in others without effect. It has also been used for capping exposed nerve-pulps, as it is known to be antiseptic as well as anæsthetic. The *Dental Cosmos* for December contains the experiences of one or two well-known operators in America, who had found marked relief to result in very sensitive cavities by the use of cocaine, and they point out that the cavities should be made quite dry, then the cocaine applied for a few minutes and the cavity again dried, when the sensitiveness seemed to be much lessened. It had also been found useful for deadening the excessive sensibility of the contents of root canals when clearing them of the remains of the nerve pulp. One of these gentlemen reports his successes and failures to be about equal. As a general result, from these and other experiments, it may be concluded that cocaine is without doubt of much value in dental surgery, but the complete *rationale* of its most successful use is as yet undecided. Mr. Brunton of Leeds recommends the citrate of cocaine in a pasty condition for allaying the sensitiveness of dentine.

SELOUS v. THE WIMBLEDON AND CROYDON SANITARY AUTHORITIES.

THIS case, in which the plaintiff, as the reversioner of a residence known as Garratt House, claimed damages and an injunction against the Wimbledon urban and the Croydon rural sanitary authorities for proceedings in connexion with their sewage farms, has occupied Mr. Justice Denman for a considerable time. The judge took the case without a jury, and having himself visited the premises in question, he last week delivered judgment. On the plaintiff's property is a piece of water known as the Western Pool, which is connected with the river Wandle. The Wimbledon local board have their sewage farm close by, and a part of it consists of a field known as the Willow-mead, adjoining the Western Pool. The plaintiff complained of nuisance from the sewage farm operations, and also of the eddying back of their sewage effluent into his pool. The Croydon authority, he further complained, discharged some of their effluent directly into the Western Pool, the amount varying, but it carried with it on an average more than a ton of foreign matter a week. A camp shedding had also been erected on the plaintiff's property, to carry an effluent pipe into his pool. Mr. Justice Denman, after hearing testimony to the recent efforts made by the Wimbledon Local Board to carry on their arrangements for sewage disposal in a satisfactory manner, decided that they had no right to erect the camp shedding, and must pay damages and remove it; and that the plaintiff was further entitled to damages for the manner in which the sewage had been disposed of on the Willow-mead and for the contamination of his pool. The nuisance on the latter head was, however, nominal, and the judge stated that if the effluent from the Wimbledon farm was maintained at the standard reached on the day of inspection, the authority would, in his opinion, comply with the order the Court was about to make. As regards Croydon, it was decided that the authority had no right to place the mouth of their effluent pipe in the Western Pool, and the judge further expressed an opinion that the Legislature had not authorised local authorities to carry water upon the premises or land of a private owner. In this case, however and quite apart from any such authorisation, the effluent was so impure that sewage fungus was discharged from the

pipe into the pool, and, unless the arrangements were soon altered, the present damages of £200 would be liable to be increased. The case is one of importance in the interests of the public, for local authorities, having the public rates to fall back upon, are but too apt to interfere in this matter of sewage disposal with private rights; and it is not often that the aggrieved party can afford to command the assistance of a court of law.

THE TRADE IN CHOLERA GERMS.

WE are not surprised to find a lay contemporary "poking fun" at the new trade which has sprung up in bacilli &c. for microscopic purposes. It is necessary that these organisms, which are alleged to be the "germs" of disease, should be brought under the notice of the profession, and the purveyors of "specimens" must of course be the agents in their distribution; but we confess that it can scarcely strike the uninitiated mind as decent, or even safe, to allow the seeds of a dreaded malady to be handed about, with all the risks of breakage and dissemination, and without precaution. The facts that accident is extremely improbable, and that even if these bacilli were introduced into a living organism they would not be likely to propagate the disease after the treatment they have received, are not of a nature to relieve such anxiety as the banter of our contemporary may have awakened. There ought to be an authoritative statement on the subject by those who traffic in these "germs," as well as by scientific investigators who use them for study or experiment.

"SYMPATHY" BETWEEN TWINS.

IF two projectiles of similar construction and properties are thrown from the same gun simultaneously, they are not unlikely to travel in lines closely parallel. We do not speak of "sympathy between" these two objects. The facts that they are themselves alike, and that they have been similarly conditioned, are held to account for the accord they show in behaviour. Doubtless much of the so-called "sympathy" between twins is to be explained on this principle. Every now and again we hear marvellous stories of twins suffering together and dying together. Much of the parallelism is probably made up of incidents "remembered," and which did not strike the narrators until after the climax had been reached in some striking community of action or suffering. When we come to sift the chaff from the wheat in these stories, there is little left which cannot be explained on the grounds of similarity of nature and conditioning.

A PREMIUM ON DISEASE.

THE French Government Commission on Unwholesome Lodgings has issued a report concerning the condition of the Rue Ste. Marguérite, where the cholera broke out among the rag-pickers who frequent this neighbourhood. In the forty-seven houses of this street there were forty-five deaths at the last epidemic; but, after all, diphtheria, typhoid, and small-pox are more fatal than the occasional visit of cholera. The death-rate for this quarter of Paris is estimated at 36·2, whilst the average of the city is put down at 28·1, and that of the aristocratic seventh arrondissement at only 16·5 per 10,000 of the population. The death-rate of the Rue Ste. Marguérite, though inferior in figures to certain English slums, is very high when we consider that there is a far smaller proportion of children among the French rag-pickers. The Commission further states "that the number of old men is below that of five-sixths of the Paris arrondissements, and that the recruits are notoriously inferior in stature, a fact which proves they are exposed permanently to morbid influences." The remedy suggested will not, however, tend to abolish such nuisances. It is proposed that the proprietors should be expropriated and a large number of the houses pulled down. The latter part of the proposal must be cordially approved; but expropriation would mean the payment of heavy and unmerited compensation to proprietors who, by neglecting their duty, have caused the premature death of a great number of people; it would be placing a premium on unwholesome dwellings. Unscrupulous speculators would court expropriation by converting their property into a centre of disease.

STRICTURE OF THE RECTUM AS A CAUSE OF PROLAPSUS.

IN the January issue of the *Revue de Chirurgie* Dr. Eug. Bœckel relates the cases of three children brought to him for troublesome prolapsus of the rectum, in whom he found the summit of the protrusion to be formed by a narrowing of the intestine. In each case the dilatation of the stricture was followed by a speedy cure of the prolapse. Dr. Bœckel asserts that if looked for it will be found that the majority of cases of prolapsus recti in young children are caused by congenital strictures of the upper extremity of the rectum. He states, also, that the conical shape of the protrusion and the extreme narrowness of the orifice at its end are the diagnostic features of this form of prolapsus. The treatment recommended is the wearing of a tubular pessary to dilate and hold in place the stricture, while allowing flatus and liquid fæcal matter to escape. We are unable to accept altogether these views. If stricture is such a frequent cause of prolapse, it is a remarkable fact that so many cases have been cured by methods of treatment which cannot have removed such a cause, and we are by no means satisfied from the account given that Dr. Bœckel's pessaries actually dilated any stricture in the cases he records. The narrow orifice of the protrusion was probably due to the traction upon the part and to the constriction to which it was exposed in its unnatural position. Further, Dr. Bœckel is certainly in error in attributing a stricture at the junction of the sigmoid flexure and rectum to a defect in the union of the intestinal and anal portions of the alimentary canal. The anal infolding only forms quite the lower extremity of the gut.

THE PIGMENTS OF THE SUPRARENALS.

A VALUABLE and interesting communication was recently made to the Physiological Society by Dr. MacMunn, "On Myohæmatin, an Intrinsic Muscle Pigment of Vertebrates and Invertebrates; on Histohæmatin, and on the Spectrum of the Suprarenal Bodies." Physiologists have accepted Kühne's statement that muscle owes its colour to hæmoglobin, but Dr. McMunn contends that though the greatest number of voluntary muscles do owe their colour to it, yet it is accompanied in most cases and sometimes replaced by myohæmatin, whilst in other cases it entirely replaces myohæmatin. The cardiac muscle of every vertebrate animal examined by Dr. McMunn yields myohæmatin, which gives a very beautifully defined spectrum, totally distinct from any product of decomposition of hæmoglobin—e.g., methæmoglobin, acid, or alkaline hæmatin or hæmatoporphyrin. In order to demonstrate the spectrum of myohæmatin no reagent whatever is required. The spectrum consists of three bands, two of which persist after the bands caused by hæmoglobin have disappeared. The bands have been missed by other observers, simply because the presence of well-marked bands due to oxyhæmoglobin hides those caused by the presence of myohæmatin. The first band of myohæmatin occurs just before D, the next two are narrow, and placed between D and E, and two other faint bands may be present near the violet. Dr. McMunn has found myohæmatin in the cardiac muscle and some voluntary

muscles of many mammals, birds, reptiles, amphibians, and fishes. This colouring matter has also been detected in many invertebrate animals; indeed, it was first discovered in them. The substance is said to have been separated by digesting muscle in a pepsin solution, but it was slightly changed in the process; it was also obtained from the frozen myocardium of the rabbit by pressing out the plasma. Histohæmatin is a name given by the author to a class of pigments of wide distribution in the animal kingdom. Myohæmatin belongs to this class of pigment. The histohæmatins are believed to be respiratory pigments, for they can be oxidised and reduced in the solid organs, where they are found. Their absorption bands occupy almost the same place as those of myohæmatin. In the suprarenal capsules of many mammals the medullary substance gives the spectrum of hæmochromogen, while the cortex shows that of a histohæmatin. Wherever hæmochromogen is found it is probably excretory, and Dr. McMunn has only met with it in the liver and in bile, so that it must be regarded as excretory in the adrenals. It may be that the function of the adrenals is in part to metamorphose effete hæmoglobin or hæmatin into hæmochromogen. Disease of or removal of the organs, as in Tizzoni's experiments (*vide* THE LANCET, vol. ii., 1884, p. 549) prevents the removal of the pigment; hence pigmentation of the skin and mucous membranes sets in. Vulpian has shown that taurocholic acid is present in the medulla of the adrenals, of which the structure is like that of the liver; the presence of large lymphatics, together with the consideration of the facts of structure and of the well-known results of disease of these organs, tends to prove that an active metabolism takes place in them, and Dr. McMunn believes that he is justified in concluding that these organs have a share in the downward metamorphosis of effete colouring matter.

MENSTRUATION IN AN INFANT.

Il Morgagni (10th inst.) relates the case of an infant girl, who, when barely four months old, commenced to menstruate regularly. Dr. V. Derveer, who had ample opportunity of studying the case when the child was two years and seven months old, reports that she then weighed forty pounds. She had the facial expression and physical conformation of a girl from ten to twelve years of age. The mammæ were of the size of small oranges, the mons veneris well developed and covered with hair, the labia majora and other parts of the vulva fairly developed. The child was very intelligent, but of an irritable temperament, which was especially marked at the approach of the catamenial period. These recurred as a rule every four weeks and lasted four or five days, but at one time were interrupted for three months. The child was then exceedingly irritable and had sleepless nights, but perfect health was restored so soon as the menstrual regularity was re-established.

A BREECH-PIN IN THE BRAIN.

AN interesting case of recovery after severe injury to the brain is recorded by Dr. Kemper in the *American Journal of the Medical Sciences* for January, 1885. A youth, eighteen years of age, while out shooting, had his gun burst, and a piece of metal, an inch and a half long and weighing 617 grains, entered his brain through the forehead. The accident happened half a mile from his home, and the lad was alone. He was insensible for a time, but four hours later he walked home unaided, and in possession of all his mental faculties. Next day, twenty-one hours after the injury, Dr. Kemper saw the lad, and found him quite sensible, with a pulse of 64 and a temperature of 104·7°. There was a curved wound an inch and a half long vertically above the right eyebrow, through which the finger passed into the skull and on into the brain, where a hard substance was felt and subsequently withdrawn by forceps, which proved to be the breech-pin of the gun described above. A few small pieces of bone and of a felt hat were afterwards removed. Water-dressings were applied, and the youth made an excellent recovery. The depressed cicatrix pulsates, but is not tender to pressure; vision is perfect, and the only ill-effect observed is that the lad "felt the heat" during the summer.

AN EL DORADO FOR MEDICAL MEN!

WE do not wish to tempt Sir Spencer Wells or any other of our distinguished gynæcologists to leave our shores, but we cannot withhold from our readers some account of a country where the medical and surgical arts seem to be appraised at something more like their proper value than with us. We are borrowing from the letter of a correspondent in the *South American Journal*, giving an account of the general charges for medical service in the Argentine Republic. The charge for a consultation at the doctor's house is 8*s*., for a visit 16*s*., for a confinement £20. For special operations by good men, but not stars of the first magnitude, the following charges are stated to be paid without demur:—

"For extraction of ovarian tumour	£1200
Amputation of arm, principal	600
" " two assistants, each ...	400
Delivery with operation	400
Attendance during typhoid fever	200
Visit by a physician for dropsy	50

Consultation fees, £20 and upwards."

Not only is it possible to make money in the Argentine Republic, but it is easy to invest it properly. The climate is of great variety over a territory extending from the tropics to Cape Horn. In order to practise, an examination must be passed and a licence obtained from the Government Medical Board. This examination is conducted in the Spanish language, which must be mastered by the candidate. But this is no great hardship, considering how fine a language it is and how great would be the reward of reading "Don Quixote" in the original—the one book which Sydenham recommended to Sir Richard Blackmore. The correspondent signs himself "Honorarium," and will be glad to answer any inquiries addressed to him through the journal in which he writes.

THE HABITUAL DRUNKARDS ACT.

WE regret to see that Mr. Paget, the stipendiary magistrate for Hammersmith, seems to have raised an unnecessary difficulty in the way of an unfortunate lady, an habitual drunkard, getting into a home registered under the Act for dealing with such cases. Everybody knows the miserable weakness and inadequency of this piece of legislation, the consequence of which is that hundreds of habitual drunkards are going to wreck and ruin, and carrying their families with them. The weakness we refer to is, of course, that part of the Act which requires the consent of the drunkard, who is generally incapable of such an unselfish and enlightened act. But Mr. Paget had not this difficulty to encounter. The lady was quite willing—to her credit be it spoken—and she was most kindly assisted by two clergymen, who took much trouble to get the necessary authorisation and to make all the arrangements. Thereupon Mr. Paget objected to sanction the removal—or, as he saw fit to describe a legal and beneficent proceeding, "the imprisonment"—on the ground that the retreat to which the patient was to be sent was not in the county in which he had jurisdiction. There is nothing, so far as we know, in the Act which requires the consenting magistrate to be in the same county as the retreat; and it is surely intolerable for any magistrate

to raise a prejudice against treatment in a retreat by calling it imprisonment. Mr. Paget's action in this matter requires further attention, and we hope will receive it. Meantime, we are glad to learn that the patient has been safely removed to Colman House Retreat, Worcestershire, the only licensed retreat exclusively for the reception of ladies.

PROSELYTISING IN HOSPITALS.

IT is much to be regretted that those who cheriah earnest views on the subject of religion should so generally regard hospitals as fit places for the propagation of their special faiths. We have no desire to make any particular reference in these remarks. Suffice it to say that there is need of greater consideration in many quarters which should be free from censure or even suspicion in this respect. Hospitals and infirmaries are homes of cure for the sick, not places of repentance, retreats for the careless or distressed in mind. It is desirable that chaplains should be appointed to officiate at the institutions, but their ministrations ought to be entirely free from a sectarian character. We do not want Catholicism, either Roman or Anglican, or Protestantism or Evangelicism, or Nonconformity or Calvinism, or any one of the hundred specialties of religious faith and doctrine, forced upon the sick in the hour of their weakness and impressibility. It is strange that those who lay stress on the essential quality of sincerity in matters of religion should desire, or even accept, the sort of "change" wrought by the persuasive influence of chaplains and "sisters" at a time when the subjects of this influence are obviously not in a condition to know their own minds, much less to form persistent judgments. When we hear of patients being "converted" to and inducted into new faiths while in hospital, we scarcely know which most to deprecate—the zeal without discretion of the proselytisers, or the gullability of the proselytes.

REPORT ON SANITARY MEASURES IN INDIA.

THIS report, in which are briefly described all the sanitary measures adopted in India during the year 1882-83, is arranged under seven heads—viz., European army, native army, general population, gaols, vaccination, medical institutions, and sanitation. The statements regarding the health of both European and native trooops are exceedingly satisfactory, and the marked improvement which has taken place is naturally attributed by the Army Sanitary Commission "to the effect of sanitary improvements at military stations, and to generally improved management." Respecting the general population, it is stated that, during the year under review, 4,757,024 persons died in India. The progress recorded from all parts in the adoption of vaccination is most gratifying, and nowhere does there appear to have been offered any persistent opposition on the part of the native population to its performance. The number of deaths from small-pox in Bengal shows a falling off of more than 10,000. In the concluding pages of the report the different measures of sanitation carried out or sanctioned are passed in review, from improvements in Calcutta to works executed in military barracks and cantonments.

MEDICAL EDUCATION IN THE UNITED STATES.

THE *Chicago Morning News*, in commenting on a recent article in our columns on the Mushroom-like Growth of Medical Schools in the United States, does not seriously invalidate our representation, but tries to show that, as regards the State of Illinois, the effect of an Act to regulate the Practice of Medicine has been greatly to reduce the number of unqualified persons in the State. The *Morning News* further admits that in December, 1884, 116 Institutes of all classes in the States were entitled to grant degrees and diplomas. In Illinois, indeed, the State Board now requires all entrants to the profession to pass a preliminary examination; but this only covers the subject of reading and writing, so as to exclude such a gentleman as is described as "A Nachural Practishuner," or that other who had practised ten years under "the supervshen of a perseptor and attended to ful corses of instructions, at —— colag." Illinois has been followed in this step, we are told, by 102 other Institutions; but the step so modestly described by our contemporary is not a very long one, and leaves much to be desired. He admits that in 1880 there were not half a dozen Colleges in the country which instituted any sort of preliminary examination.

THE LATE SURGEON C. B. LEWIS, ARMY MEDICAL DEPARTMENT.

A BRASS to the memory of this promising young officer has recently been placed in the chapel of the Royal Victoria Hospital at Netley. Surgeon Lewis entered the service about six years since, and died of cholera at El Warden, while serving with the army of occupation in Egypt, on July 30th, 1883, at the early age of twenty-nine. During his student days at King's College, Lewis was universally popular, and was well known as an athlete, having won the Mile Challenge Cup in the United Hospital Athletic Sports for several years in succession. The memorial brass has been erected by several of his brother officers and old friends in both the Indian Medical Service and Army Medical Department, and has been well executed by Messrs. Clayton and Bell of Regent-street.

THE SECOND REPORT OF THE SPECIAL CHOLERA COMMISION IN INDIA.

THE supplement of the official Gazette of India just received contains an important communication from Dr. E. Klein to the Sanitary Commissioner with the Government in India, in continuation of the memorandum published a short time ago by the Special Cholera Commission in India. In the report, which we hope to publish *in extenso* next week, the statement is made that comma bacilli have been found in tanks without any case of cholera having occurred among the large number of people using them.

MICRO-BIOLOGY.

THE last published number of the *Barcelona Review of the Medical Sciences* contains an elaborate article by Dr. Carreras-Solà on the relations of microbes to diseases ("Los Microbios en sus Relaciones con las Enfermedades,") and one by Dr. Ferrano on the parasite of cholera. Both contributions are illustrated by elaborate lithographic plates, in which the bacilli of different diseases are represented with so much distinctness as pictorially to surprise investigators who know how difficult it is to differentiate, under the microscope, between the varieties of pathological microbes.

DIPHTHERIA AT WATFORD.

DIPHTHERIA, which is by no means a common disease in Watford, was exceptionally prevalent at the close of last year, and it appears to have been mainly spread through the agency of elementary school attendance. The disease has since abated. Disinfection of schools during the Christmas holidays has been carried out; and now that the reassembling of children has taken place, it will be well to follow out the principles which have been laid down on this subject by the memorandum as to infectious diseases and school attendance issued by the Local Government Board.

THE CLINICAL SOCIETY.

THROUGH the loss of a portion of the manuscript the annotation headed as above in our last week's issue failed to mention the vote of thanks so warmly accorded to Dr. Sidney Coupland on the proposal of Mr. W. Haward, seconded by Dr. J. Anderson. Mr. R. W. Parker responded for the vote of thanks proposed by Dr. Semon, and Dr. Fowler for that to the other retiring officers of Council.

SMALL-POX HOSPITALS.

THE discussion on the question whether small-pox hospitals are necessarily a source of danger to the surrounding neighbourhood will be continued at the Society of Medical Officers of Health, 1, Adam-street, Adelphi, on Monday, January 26th, at 7.30 P.M.

THE death is announced of Professor Benjamin Silliman, the distinguished American physicist. He was joint editor of the *American Journal of Science* from 1838 to 1854, and since the latter date had been associated with Professor J. D. Dana as editor and proprietor. Deceased was Professor of Medical Chemistry and Toxicology in the University of Louisville, Kentucky, from 1849 to 1854, and in the latter year succeeded his father as Professor of General and Applied Chemistry in Yale College.

DR. G. H. BALLERAY of New Jersey reports a case of strangulated hernia in a man aged eighty, who was suffering from an attack of facial erysipelas. Herniotomy with opening of the sac was performed, and the man recovered, the wound healing well, "the reparative process being apparently unaffected by the existence of the facial erysipelas." The operation was performed with strict Listerian precautions.

MESSRS. BAILLIÈRE, TINDALL, & COX announce the publication of a new periodical devoted exclusively to surgery, called *Annals of Surgery*. It is to be an international monthly review, edited in America by Dr. L. S. Pilcher of Brooklyn, and in this country by Mr. C. B. Keetley. In addition to original memoirs, editorial articles, and reviews, considerable space will be devoted to an Index of Surgical Progress.

IN a lecture delivered on the 16th inst. at the Royal Institution before a crowded audience on the subject of Living Contagia, Professor Tyndall dealt at length with the researches of Pasteur in connexion with the germ theory of disease, and declared that recent discoveries respecting hydrophobia and splenic fever showed that experiments with animals were turned to very profitable account.

M. TOULOUZE describes in the *Union Médicale* some old surgical instruments recently found during some excavations on the site of an old Roman road in the Rue Clovis in Paris. He believes that they date back to the period of Galen. They consist of an epilation forceps, a probe, and an ear-scoop—at least these are the uses for which M. Toulouze regards them as applicable.

SIR WILLIAM MUIR, K.C.S.I., LL.D., D.C.L., was on the 20th inst. unanimously chosen by the curators of the University to succeed Sir Alexander Grant in the Principalship of Edinburgh University.

PROFESSOR A. R. SIMPSON and Dr. BERRY HART have withdrawn from the Gynæcological Society.

THE Abbott-Downing Company, of Concord, make a horse ambulance which is well adapted for the excellent ambulance service of the American cities. It is a four-wheeled conveyance which is fitted up with every requisite and can be confidently recommended to firms and institutions in this country who need such a conveyance.

THE death is announced of Professor Friedrich von Stein, who held the chair of Zoology at Prague for more than thirty years. His chief work, published in 1854, was on the Development of the Infusoria. Professor von Stein was a distinguished pupil of Johannes Müller.

IN consequence of the prevalence of small-pox in Newington, the guardians of the St. Saviour's Union on the 15th inst. issued an order prohibiting the admission of visitors to the inmates of the Newington Infirmary, except in urgent and dangerous cases.

NEWS from the Mediterranean Squadron announces the death in Bighi Hospital, from typhoid fever, of Mr. Anthony Lynch, Surgeon, R.N. It is also stated that the mortality amongst medical men at Malta has lately been very heavy.

THE Local Government Board are stated to be about to hold an inquiry into the management of the small-pox camps and other institutions under the control of the Metropolitan Asylums Board.

MRS. MARSHALL HALL, the widow of the great physiologist, died on the 14th inst. at the house of her nephew, Dr. Marshall Hall Higginbottom, Nottingham, aged eighty-three.

RECENT advices from Alexandria announce that Dr. Sandwith has resigned his post as Director of the Board of Health at Cairo.

WE regret to see the name of Surgeon Magill, M.D., in the list of officers severely wounded at the battle of Abu Klea.

CANTOR LECTURES.

BY G. V. POORE, M.D., F.R.C.P.

ON CLIMATE IN ITS RELATION TO HEALTH.

AT the first lecture on Monday, Jan. 12th, delivered at the Society of Arts, Dr. Poore dealt mainly with those facts in regard to climate which are a necessary preliminary to any adequate discussion of the subject. Commencing with the chemical composition of the air, he pointed out that although its uniformity was not absolute, it was very nearly so—so nearly that it was exceedingly improbable that any variation in the chemical composition of the air could have any effect on the health of localities. He spoke only of the "open air," and left crowded dwellings out of consideration. Thus, the normal amount of oxygen in the air was usually given as 20·96 per cent. by volume, and the extreme figures given by Angus Smith were 20·86 per cent. in the East-end of London, and 21·00 per cent. on the northern heights of London. These variations were very trifling when compared with the variations in the absolute quantity of oxygen taken into the lungs under different conditions of pressure and temperature. Thus, of two men, one breathing air at a temperature of 32° F., and the other breathing air at a temperature of 80°, the former would get 192·6 grains of oxygen per hour more than the latter; and of two men, the one breathing air at sea level and

the other breathing on a mountain 5000 feet high, the former would get 361·88 grains per hour more oxygen than the latter, and yet the man on the mountain would probably be the more robust of the two. In the same way the variations in the amount of carbonic acid were too trifling to affect the health of a community. If oxygen were persistently deficient and carbonic acid persistently in excess, we had to inquire why, and the cause would be found to be due to combustion, respiration, and putrefaction, the last being a great cause of disease. The causes of the varying amounts of moisture in the air were next dealt with, and the causes of its deposition in the form of dew, fog, and rain. The uses of moisture in shielding us from the sun, and in checking radiation and thus preventing sudden alternations of temperature, and the warming effects of rain, were explained, and the conclusion was arrived at that although the moisture in the air affected our sense of well-being and comfort, and more especially of invalids, yet the amount of moisture, be it great or small, had *per se* little or no effect on the health of a community.

In so far as moisture favoured putrefaction, it had a very important indirect influence on health; and when warmth and moisture coincided, putrefaction of all kinds was apt to run riot, and zymotic disease was very prone to spread.

So with regard to temperature. It was an acknowledged fact that the power possessed by the human body of withstanding the extremes of heat and cold was, in so far as climatic temperature is concerned, unlimited. The only trouble due to excess of temperature was sunstroke and heat apoplexy, and even these were often due to errors of hygiene, dress, and diet more than to the heat. As for extremes of cold, ample food and ample clothing were all that was necessary to enable a healthy man to withstand them. The history of the twenty-five men belonging to the *Eira*, who, after ten months spent in a hut on Franz Josef Land, were picked up in robust health, afforded ample proof that food and protection enabled a man to keep well in sixty-five degrees of frost, and that the mere breathing of air having a very low temperature for months together was not harmful even when combined with deprivation of light and a state of crowding in the hut which in this, or still more in warmer latitudes, must have proved fatal to many of them. The wise precautions of Mr. Leigh Smith and Dr. Neale enabled these men to pass through an arctic winter unscathed.

At the second lecture on Monday, Jan. 19th, Dr. Poore began by calling attention to the rude health enjoyed by the crew of the *Eira* in the arctic regions, under conditions of which overcrowding and dirt were the chief characteristics. In answer to the question why conditions were harmless at the Pole which would certainly be harmful or even fatal at the tropics, he offered the explanation that at the Pole putrefactive and allied processes were impossible, owing to the fact that in the cold, dry arctic regions it was impossible for the bacteria, upon which putrefaction depends, to manifest any vitality.

Although he had ventured to assert that the extremes of heat and cold were not necessarily great producers of disease, a glance at one of the diagrams on the wall offered an apparent contradiction to this assertion, for from it they would learn that the deaths from respiratory disease increased in cold weather and the deaths from diarrhœa steadily increased in hot weather. There was a distinction to be drawn between a cause of disease and a cause of death. Cold weather was undoubtedly very fatal to persons with lung disease, disease contracted by overcrowding, intemperance, and filthy surroundings. The starved and the aged were very prone also to die from a congestive pneumonia. During cold weather also overcrowding in dwellings reached its greatest height. Cold was therefore to be considered as very prejudicial to persons with lung disease, but it could only be reckoned as an indirect and secondary cause of those diseases. Again, the heat was not the cause of the diarrhœa. It was only an indirect cause *vid* sour milk, putrid food, rotten fruit and emanations from putrefying sewers into the air or drinking water. A glance at the chief tropical diseases would show how many of them were connected with the putrefaction and decay of organic matter. Malaria, yellow fever, and cholera were all instances of this. Now, putrefactive and allied changes had been shown by Pasteur to be dependent on micro-organisms, which were found in the air, the soil, and the water. The study of these micro-organisms had become a study of prime importance, more especially as not a few of the zymotic diseases had been proved to be closely dependent upon them.

In considering the atmosphere as a cause of disease, nothing was of greater importance than a study of the floating matter in it. This line of research was being methodically carried out in Berlin and Paris, and the facts brought forward that night were mainly those furnished by Dr. Miquel, of the Observatory of Montsouris, in Paris. That solid particles could be carried hundreds of miles by the air was well known, for dust had been known to fall on ships at sea which must have been blown from African deserts 600 or 800 miles away. The labours of Ehrenberg, of Blackley (who directed attention to the large amount of pollen in the air), and of Maddox (who had discovered great varieties of fungoid spores in the air), were alluded to. Experiments conducted by Miquel at Montsouris had shown that in the years 1879-82 there were on an average from twelve to fifteen fungoid spores in each litre of air, and that these spores were more plentiful in hot than in cold weather. In addition to spores and pollen, the other matters found in the air and readily distinguishable by the microscope are mineral particles, particles of clothing, starch grains, and occasionally unicellular plants and ova of infusoria. The researches carried out by Miquel on the numbers of bacteria in the air have been most laborious. His method has been to draw through a large number of tubes of a special pattern and partially filled with sterilised bouillon a measured quantity of air, and to preserve the tubes a sufficient length of time to ascertain whether any bacterial growth had taken place. Thus M. Miquel would distribute 100 litres of air through fifty tubes, and if after due lapse of time ten of these tubes manifested bacterial growth and the remaining forty continued sterile, he would be sure that there were at least ten bacteria in the portion of air examined. This work has been done day after day, and often many times a day, by Miquel and his assistants, and we cannot too highly appreciate their great devotion and enthusiasm. Miquel has found that in 1880 there were on an average 500 bacteria in each cubic metre of air at Montsouris. In 1881 the average was 590, while in 1882 it was only 320. The highest numbers were recorded when the wind was north-east, and before reaching Montsouris had swept over a great part of the city. Ozone had no effect on the number of bacteria. The number is always small during rain, increases as the drying of the soil progresses, and decreases again if the dryness be prolonged beyond a week. In the centre of Paris, Rue de Rivoli, the number of microbes averaged, in 1882-83, 2490 per cubic metre of air, being nearly five times as many as at Montsouris. M. Miquel made experiments in the Alps on air from different altitudes, and he compares his results with the results obtained at the same dates in Paris, July, 1883. At an altitude of from 2000 to 4000 metres there were 0·00 microbes per cubic metre; on the Lake of Thun (560 metres), 0·80 per c.m.; near the Hôtel Bellevue, Thun, 2·50 per c.m.; in a room of the hotel, 60·00 per c.m.; in the park at Montsouris, 760·00 per c.m.; in the Rue de Rivoli, 5500·00 per c.m. The poorness in microbes shown by the mountain air is attributed by Miquel (1) to the lessening of pressure, and the consequent expansion and dilution, as it were, of the air; (2) to the lessened density, decreasing the power of the air to suspend solids; and (3) to the progressive disappearance of productive foci of bacteria. Miquel's researches, carried out at the Hôtel Dieu, and at Notre Dame de la Pitié, showed that in the wards the average for the year was 11,100 bacteria per cubic metre of air. "Taking the whole year through it was found that the increase and decrease of bacteria in the air of hospital wards obeyed laws very different from those observed in the open air. The hospital bacteria, in fact, reached their minimum at a time when the windows could be kept open in June, July, and August, when the average fell to 5500." The maximum of the hospital (28,000) was reached in January in very cold weather, when the number in the air of the street had fallen to 160. "If," says M. Miquel, "hospitals be built in the middle of cities the surrounding quarters must receive microbes, which are possibly not always harmless."

Assuming, as we may certainly assume, that microbes are the actual cause of some zymotic diseases, and that these microbes may be wafted to us through the air as readily as they may travel by other channels, we must still remember that happily something more than the microbe is necessary for the production of the disease, and this something is found in the conditions necessary for its growth. This implies not only moisture and a certain amount of

warmth, but also a soil suitable for the bacteria to grow in. That all plants do not flourish equally well in all soils is well known, and it is also well known that the presence or absence of some minimal ingredient in a soil may make an enormous difference in the resulting crop. This fact is very strikingly shown by Raulin's experiments on the growth of the Aspergillus niger, the mould which grows so luxuriantly on lemons and other acid fruits. M. Raulin grew this fungus in a fluid containing sugar, tartaric acid, &c., which he devised himself, and which he found gave uniform results. Raulin found that the total crop of fungus grown in this fluid in a dish of definite area weighed (when carefully dried) twenty-five grammes. Raulin's liquid contained $\frac{1}{16000}$ part of the metal zinc, and if this were withdrawn the resultant crop fell to 2·5 grammes, or only $\frac{1}{10}$ of what may be considered a full crop. Further, Raulin found that the addition of $\frac{1}{1000000}$ part of nitrate of silver stopped the growth altogether, and that the growth of the aspergillus will not even commence in a silver bowl, so sensitive is the fungus to the action of that metal.

These experiments are most instructive, as showing us what apparently insignificant trifles may cause the growth of an organism to flourish or languish. They make it less difficult for us to frame an hypothesis to explain why certain zymotics seldom occur, and never flourish twice in the same soil; why certain families are more smitten by certain zymotics, such as tubercle and scarlet fever, than others; why in times of epidemic some persons escape; why in the old days of inoculation for the small-pox the inoculated disease was seldom so virulent as the disease "caught" in the ordinary course.

A NEW HOSPITAL IN BRUSSELS.

A NEW hospital at Molenbeck, on the plateau of Koekelbergh, an outlying district of Brussels, has just been opened, and will form an important addition to the medical services of that town. The main entrance faces the rue Vandenbogaerde, and consists of a vast structure reserved as the dwelling of the director, M. Deneus, the pharmacy, the laboratory, &c. A wing of this building is devoted to the store rooms, the reception of out-door patients, bath rooms, and operating amphitheatre. By the side of the latter there is a small room where patients, who cannot support transportation to their ward after operations, may rest and gather strength. The patients, on admission, are compelled to take a bath at once and dress in the hospital uniform. There are eight pavilions for the patients and two of the pavilions have but one floor. They are situated longitudinally with the prevalent winds and are connected by an open passage or gallery. Altogether there are 155 beds; each ward contains sixteen beds, a nurse's room, bath, closets, and one isolation room. The accommodation is divided evenly for men and women. The two pavilions that have but one storey are reserved for infectious cases, and these are divided into twenty-two small rooms, each with only one bed. Large gardens surround the pavilions, and the wash-house, the dead-house, the post-mortem room, disinfecting stove, &c., are as far away as possible. The building is warmed by hot water pipes with two generators of 60 horse power, and it is said that a satisfactory system of ventilation has been established. The land cost £2200, the building £12,000, while a recent lottery produced £520 towards defraying the purchase of the necessary furniture. Considering that there are already several large hospitals in Brussels, and that, after all, the capital of Belgium does not possess 400,000 inhabitants, this new work of charity is highly creditable.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 6209 births and 4127 deaths were registered during the week ending the 17th inst. The deaths showed a decline of 128 from the high number in the previous week, and were equal to an annual rate of 24·2 per 1000 of the estimated population of these towns in the middle of this year, against 25·0 and 24·9 in the preceding two weeks. During the last quarter the death-rate in these towns averaged 21·4 per 1000, against 23·0 and 21·2 in the corresponding periods of 1882 and 1883. The lowest rates in these towns last week were 16·0 in Hull, 19·1 in Brighton, and 19·2 in Derby. The rates in the other towns ranged upwards to 31·3 in Bolton, 31·6 in Wolverhampton, 31·6 in Plymouth, and 32·8 in Cardiff. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 375 and 372 in the previous two weeks, were 370 last week; of these, 108 resulted from whooping-cough, 70 from measles, 59 from scarlet fever, 50 from small-pox, 34 from diphtheria, 28 from "fever" (principally enteric), and 21 from diarrhœa. No death from any of these zymotic diseases was recorded last week in Brighton or in Plymouth, whereas they caused the highest death-rates in Sunderland, Preston, and Cardiff. The greatest mortality from whooping-cough was recorded in Bristol, Wolverhampton, and Preston; from measles in Preston, Sunderland, Leicester, and Cardiff; from scarlet fever in Leeds and Halifax; and from "fever" in Derby. The 34 deaths from diphtheria in the twenty-eight towns included 14 in London, 4 in Portsmouth, 2 in Manchester, and 2 in Salford. Small-pox caused 78 deaths in London and its outer ring of suburban districts, 2 in Liverpool, and 1 in Birmingham. The number of small-pox patients in the metropolitan asylum hospitals situated in and around London, which had been 1079, 1013, and 1001 on the preceding three Saturdays, was 1009 at the end of last week; the admissions, which were 161, 171, and 224 in the previous three weeks, were 216 last week. The Highgate Small-pox Hospital contained 96 patients on Saturday last, against 87 at the end of the previous week; 29 cases were admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had been 370, 537, and 609 in the preceding three weeks, declined again to 552 last week, but were 53 below the corrected weekly average. The causes of 93, or 2·3 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Brighton, and Leicester, and in four other smaller towns. The largest proportions of uncertified deaths were registered in Sheffield, Oldham, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 30·7 and 30·5 per 1000 in the preceding two weeks, further declined to 29·0 in the week ending the 17th instant, and was 4·8 above the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 18·3 and 21·2 in Perth and Greenock, to 33·4 in Paisley and 34·4 in Glasgow. The 709 deaths in the eight towns showed a decline of 35 from the number in the previous week, and included 30 which were referred to whooping-cough, 20 to measles, 13 to diarrhœa, 12 to "fever," 5 to scarlet fever, 3 to diphtheria, and not one to small-pox; in all, 83 deaths resulted from these principal zymotic diseases, against 110 and 94 in the preceding two weeks. These 83 deaths were equal to an annual rate of 3·4 per 1000, which exceeded by 1·2 the mean rate from the same diseases last week in the twenty-eight English towns. The 30 deaths from whooping-cough corresponded with the number in the previous week, and included 8 both in Dundee and Glasgow, 7 in Leith, and 5 in Edinburgh. The fatal cases of measles, which had been 38 and 26 in the previous two weeks, further declined to 20 last week, of which 14 occurred in Glasgow and 5 in Dundee. The 13 deaths attributed to diarrhœa corresponded with the number in the corresponding week of last year. The 12 deaths referred to "fever" exceeded the numbers returned in the preceding two weeks; they included 7 in Edinburgh and 2 in Glasgow. Three of the 5 deaths from scarlet fever, and all the 3 from diphtheria, were returned in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 203 and 198 in the previous two weeks, were 199 last week, and exceeded by 94 the number returned in the corresponding week of last year. The causes of 105, or nearly 15 per cent., of the deaths in the eight Scotch towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 38·5 and 31·2 per 1000 in the preceding two weeks, was 31·0 in the week ending the 17th inst. During the thirteen

weeks ending the 27th ult. the death-rate in the city averaged 29·4 per 1000, the mean rate during the same period not exceeding 19·8 in London and 19·7 in Edinburgh. The 210 deaths in Dublin last week showed a further decline of 1 from the high numbers in recent weeks, and included 23 which were referred to the principal zymotic diseases, against 24 and 19 in the previous two weeks. Of these 23 deaths, 13 were due to scarlet fever, 4 to "fever" (typhus, enteric, or simple), 3 to whooping-cough, 3 to measles, and not one either to small-pox, diphtheria, or diarrhœa. These deaths were equal to an annual rate of 3·4 per 1000; the rate from these diseases last week being equal to 2·1 in London and 2·5 in Edinburgh. The 13 fatal cases of scarlet fever showed a considerable increase upon recent weekly numbers; while those of "fever," whooping-cough, and measles scarcely differed from the numbers in the previous week. Ten inquest cases and 8 deaths from violence were registered within the city, and 64, or nearly a third of the deaths, were recorded in public institutions. The deaths of elderly persons showed a considerable decline from the number in the previous week. The causes of 27, or nearly 13 per cent., of the deaths in the city last week were not certified.

Correspondence.

"Audi alteram partem."

THE UXBRIDGE TRAGEDY.

To the Editor of THE LANCET.

SIR,—I enclose a full account of the facts bearing upon the medico-legal aspect of the above case.[1] In your editorial note on my last letter you say, "We can only express our regret that Mr. Bowlby should feel himself injured by what he conceives a misrepresentation of his evidence as to facts and opinion." I am obliged, Sir, for such an expression; but you can scarcely expect me to accept it as a sufficient apology for the annotation of which I complain. There can be no doubt this annotation implied that the prisoner was convicted through some gross inaccuracy in the medical evidence. It must be known to you that the public and the daily press have so interpreted it, and that it has been taken as the text for various articles whose chief aim has been to discredit scientific evidence in general. And although your paragraph was vague, and consequently I could not guess at its precise meaning, I would remind you that you made a definite charge against me, and that charge you have neither supported by one word of proof nor have you withdrawn it. I will ask you, then, to state definitely what were "the inferences of the medical witnesses" which "were at variances with similar known facts in other cases on record, *in which a shot has been fired by a suicide between the infliction of a mortal wound—even of the heart—and death!*" for I feel I have a right to know in what particular point *material to the issue of the trial* such inferences were in your opinion erroneous. You disclaim my supposition that you hereby assumed it necessary to presuppose the possible self-infliction of other wounds after that of the heart, and say that you "obviously wrote with the purpose of illustrating what may be done after a fatal wound of a vital organ." If, Sir, you only wrote with that intention, will you kindly explain what bearing such illustration has upon the inferences of the medical witnesses? I stated in my last letter that I had allowed of the possible self-infliction of even a third wound in the deceased, in spite of the damage caused by the first two, and I said that your annotation implied the contrary. To this you have not replied. You write that "a wound in the back is peculiarly likely to be self-inflicted if the suicide falls forward or on his side while the arm, still clutching the pistol, is convulsively drawn, stiffened, and by the fall twisted back." That sentence undoubtedly implies that there was an easy and obvious way of accounting for the back wound in the deceased, and is therefore a serious imputation on the capacity and common sense of the medical witnesses. Against the acceptance of such an explanation I would urge—first, that, instead of the diseased being found clutching the pistol, the weapon lay by his side; second, that instead of his arm being "convulsively drawn, stiffened, and by the fall twisted back," his right arm was beneath him as he lay on his face, and his left arm was outstretched above his head with the palm downwards on the ground. You will thus see that your suppositions are without a shadow of proof by way of support. It seems to me just about as "probable" that a man should shoot himself in the back after firing a bullet through his heart as that he should place himself in the position you so graphically describe, and until you adduce in evidence some of the numerous cases with which, from the way you write, you no doubt are acquainted, I feel sure you will allow me to differ from you as to the "likelihood" of the act in question.

And, then, I must again remind you of what I wrote in my previous letter. It is not sufficient to account for "a wound in the back." The question is, "Does your theory account for the particular wound found in the back of the deceased"? If not, then it is certainly misleading, for the natural implication is that it does account for it. Can you, and will you, explain how the deceased could himself, with the pistol in his own hand, inflict the wound I described to the jury, a full account of which is in the report which I enclose. You "believe" that one reason why "neither the counsel for the defence nor the jury were able to solve the difficulty" (referring, remember, to the infliction of the back-wound) "was that they were not clear as to the possibilities, probabilities, and certainties of the case in its medical aspect." Here again is another supposition unsupported by a word of proof, and therefore not demanding a reply. Will you then explain away the difficulty by accounting for the wound? You say that your information was derived from "the usually accredited channels," and as you do not deny my suggestion that it came from the daily press, I presume this is the source indicated. I have not altered my opinion that "it is scarcely fair to condemn the medical evidence upon such authority." On the contrary, in my own defence, and in the interests of medical witnesses at large, I beg to protest as strongly as possible against your action as Editor of an important medical paper in this respect. The case was one of importance, you might easily have obtained additional evidence, but instead of this you allowed yourself to be led away by insufficient evidence, and thereby encouraged a foolish outcry against not only myself, but medical witnesses in general. I do not in the least dispute that your "comments were made in the interests of justice;" I feel sure they were, but I believe you have been misled by inaccurate reports, and I feel confident that if you find such to be the case you will correct the error. It is in the same interests of justice that I ask you to publish both this letter and the full account of this case that I enclose; and, finally, I would remind you that I ask for an explanation of but two points—1. In what particular, essential to the result of the trial, were "the inferences of the medical witnesses at variance with similar known facts in other cases on record in which a shot has been fired between the infliction of a fatal wound, even of the heart, and death"? 2. Can you, and will you, explain either how and in what position, by your own theory or by any other, could the deceased himself, with the pistol in either hand, inflict the particular wound in his back which I have described in my report and in my evidence.

I am, Sir, yours truly,

Queen Anne-street, Jan. 6th, 1885. ANTHONY A. BOWLBY.

*** In THE LANCET of Dec. 27th, 1884, p. 1163, we stated "it did not at all follow because a bullet wound was found on the body of the deceased in such a situation that it could not have been self-inflicted, that therefore it proved a criminal act by another person. It might have resulted from accident during a struggle for possession of the revolver, or from justifiable homicide for self-preservation." And yet Mr. Bowlby could gather from another passage bearing on the same question nothing short of an attempt on our part to throw discredit on the medical evidence. Does it not occur to Mr. Bowlby that we have not shown ourselves altogether wanting in fairness, or even courtesy, by publishing his account of the case which occupied nearly *nine* columns of type? And does he fail to recognise the meaning of the following words included in the comment (p. 82) appended to his lengthy report?—"Concerning the bullet

[1] This statement appeared in our issue of the 10th inst.—ED. L.

wounds Mr. Bowlby says that Nos. 1, 2, and 3 were possibly suicidal, and No. 4 was possibly accidental, though it could not have been self-inflicted. We may at once say that we accept this interpretation as correct." Surely he cannot seriously contend that there is vagueness in the paragraph, intentional or otherwise; but be that as it may, we are content to leave the matter to the impartial consideration of our readers. Coming now to the second charge in Mr. Bowlby's indictment against us we are compelled to introduce Mr. Parrott's name, because in our previous notices of "the Uxbridge tragedy" we referred to the medical evidence in general, and not to any particular witness. Moreover, although Mr. Bowlby formally declined to implicate Mr. Parrott in any way, he wrote (p. 78, Jan. 10th, 1885), "Nevertheless, I may say that on almost all the main points we were entirely agreed"; and again at page 40, Jan. 3rd, 1885: "It is scarcely fair to condemn that evidence—given by Mr. Parrott and myself," &c. And, further, since Mr. Parrott has not disclaimed participation in the responsibility attaching to the communications of Mr. Bowlby, which cannot well have escaped his observation, we are the less reluctant to review and compare the testimony of both gentlemen, and in delivering our defence of the assertion at p. 1163, Dec. 27th, 1884, that "the inferences of the medical witnesses were at variance with similar known facts on record," &c. The quotations hereafter following are taken from a copy of the depositions before the magistrates. First, as regards the wound (No. 4 in the depositions, No. 3 in the report in THE LANCET) of the heart, Mr. Parrott stated in his examination-in-chief, "If a man had fired the shot that caused that wound he could not have fired another shot," and "supposing the other wounds to be suicidal, that must have been the last inflicted." In his cross-examination he substantially confirmed the above, for we find him saying, "The wound I saw in the heart of the deceased must have caused *instantaneous death;* by that I mean in a few seconds." Surely these inferences were, as we contended, at variance with similar known facts in other cases on record, in which a shot has been fired between the infliction of a fatal wound, even of the heart, and death. Mr. Bowlby was certainly more guarded than Mr. Parrott, but for all that his evidence, in our opinion, is open to criticism. During his examination-in-chief, it was elicited that "the effect of wound No. 4 (the one in the heart) would be to cause death within a minute or two at the latest, and in my opinion after that wound had been inflicted the deceased *could not* have caused any of the other wounds." Compare this with what Mr. Bowlby writes in THE LANCET, Jan. 10th, 1885, p. 80: "I felt, although highly improbable, it was yet *not impossible* for all three [the wound in the face, and the two in the chest—Ed. L.] to have been self-inflicted." Let it be noted that these statements had exclusive reference to the wounds *quoad* their dangerous nature, and so their bearing on the issue of incapacitation for further suicidal acts, and did not include the subsidiary question as to the distance from the body at which the shots were fired. To return to the depositions, we find Mr. Bowlby repeating or supporting his former evidence:—"I think, taking the three wounds in the front of the body, it would be almost impossible for a man to inflict the third [the one below the clavicle—Ed. L.] after having inflicted either of the other two." Nor was his resolution materially shaken by cross-examination, for he goes on to say:—"If the deceased had then [i.e., after the back wound had been caused by a supposed accident—Ed. L.] taken the pistol, he could not have inflicted the three front wounds; he could have inflicted the one through the cheek, and he could possibly have inflicted *another wound;* it is highly improbable that he could have inflicted the heart wound after he had inflicted the two such severe ones as the other two on the front of the body." If the above references do not represent the evidence of the medical witnesses at the trial—and we maintain that for all practical purposes the magisterial investigation is to be regarded as part of the trial—then we can only say we have been misinformed—misled, it may be. But whilst we admit that Messrs. Bowlby and Parrott acted with a full sense of their responsibility, and with the desire and intention of furthering the administration of justice, we hold that we only exercised a right and discharged a duty when we said, "The inferences of the medical witnesses were at variance with similar known facts in other cases on record, &c."—ED. L.

LUNACY LAW REFORM.

To the Editor of THE LANCET.

SIR,—If the Government is really preparing a Lunacy Bill this is no doubt the time for those who have, or imagine they have, ideas on the subject to bring them forward. The public, the lawyers, and the medical profession are all more or less dissatisfied with the present laws, and with many of the prevailing lunacy arrangements; but their discontent is vague, and their ideas as to the proper remedies for the prevailing disorders are, like your own, unformulated and partly contradictory. You, as representing the medical profession, say you are going to reserve your ideas for the present. This, in my humble opinion, is an unwise course to adopt. You have denounced the present lunacy laws unsparingly, and you have not been over-tender in your dealings with the officials who administer them. Now, there are about 500 members of the profession in the three kingdoms engaged wholly, or in great part, in the treatment and inspection of the insane, and this considerable fraction of the medical world look to you for some guidance in regard to this matter. They are immensely interested in the lunacy laws, and they have had much direct experience of their working, but they know that that experience needs correction by comparison with that of the general profession. I may say at once that I believe they feel deeply the apparent want of sympathy with them exhibited by some portions of the medical press. I also believe that they will be greatly disappointed if the arrangements of the future for the treatment of mental disease do not tend to make them more an integral part of the profession than they are at present. They naturally feel that having taken to a very difficult department of the profession, in which their attention is much absorbed by matters that seem non-medical, where their positions are often isolated, and in which they are often largely under the control of practically non-medical Government and local boards, it is a little hard on them to lose the sympathy and support of their profession, when they are conscious that they have assiduously done the professional work assigned them by the law. They think that they know something of what would be for the benefit of the insane in future legislation, but for obvious reasons they do not like to take any initiative in suggesting new laws. I speak for my brethren in England rather than for myself; for here, in Scotland, the position of asylum medical officers is essentially a more medical one than in England: the traditions of their office being more medical; our visiting commissioners being medical men who do not sink their profession in their office; our asylums being almost all public, with medical men on our boards of direction; our practice not being confined to our institutions, but a good deal of it being outside them, where we meet family practitioners and see mental disease in its early stages and in its milder forms. The position of some of us as teachers in medical schools brings us into contact with the fresh inquiring minds of students, too. We are neither tempted here to become purely officials, nor, in order to hoodwink the public, to disguise our officialism under the misleading euphemism of "neurologist."

If I were to summarise my lunacy experience in England and in Scotland, correcting the results somewhat by my observation of the working of the laws regulating the treatment of the insane in Europe and America, I would say that

the following would be improvements in the present English Lunacy Laws:—

1. A provision for the treatment, with a view to recovery, of recent cases of mental disease without any certification or any word of legal "insanity" whatever.

2. Provisions for adopting different modes of interfering with personal liberty on account of mental disease, and placing it under suitable treatment according to the symptoms present in various cases, thereby harmonising the law with the medical facts.

3. A provision that reasonable appeals and complaints on the part of the insane, or those held to be insane, in regard to their liberty, shall be inquired into in a formal and judicial way, sometimes even publicly, under proper conditions, thereby taking the responsibility off relatives, doctors, and asylums.

4. A provision for the classification of patients in asylums according to their mental state, the structure and arrangement of wards intended for the different classes of cases being made conformable to the mental and bodily condition of the patients who are to inhabit them.

5. A provision for the removal from asylums and for suitable guardianship elsewhere of patients who have so changed in mental condition, without having recovered since their admission, that they no longer need asylum care.

6. A provision for the systematic training and education of attendants and nurses on the insane.

7. A provision for the hospital treatment in public institutions of all the middle-class insane who need such treatment.

8. A provision that would lead to the education of all medical students in mental diseases. This, I maintain, is an easy and practicable measure, in spite of assertions to the contrary; and I think our experience in the Edinburgh University has proved it to be so. Apart from the heavy responsibility thrown on medical men in having to treat mental diseases as family doctors, and the serious risk they run in their medico-legal acts *quoad* insanity, I am strongly of opinion that the mental symptoms in ordinary diseases do not always receive the attention they deserve through their not being looked for; or their importance not being recognised, that the initiatory symptoms of mental disease are often overlooked or misunderstood; that the facts of mental heredity as influencing diathesis, disease, crime, character, morals, and social life are not always taken into account as they should be by medical practitioners; and that the whole science of medical psychology is retarded, all this partly resulting from our students not having any education in the derangements of the mental functions of the brain. On the doctrine of chances, if this great subject was brought under the notice of all students more able men would be attracted to its further study and investigation than at present. It is difficult now to attract a sufficient number of such men, and as one cause of this I cannot acquit the discouraging tone of a portion of the medical press. If the mental functions of the brain are the crown of man's life, surely their derangements are worthy to be placed beside the derangements of uterine function in the curriculum of the medical student.

9. A provision that pecuniary advantage to anyone shall be absolutely dissociated from the deprivation of any insane persons liberty.

10. A provision that all visiting government officials for the insane shall be medical men of proved acquaintance with the subject.

11. A provision that for curative establishments a larger staff of medical men shall be employed than is common at present.

12. A provision that all public institutions for the insane shall be allowed to provide out of their funds such arrangements for scientific research as their responsible medical heads shall deem requisite.

13. A provision that all boards of direction of asylums shall include at least two or three medical men, either conjoined with the ordinary directors or forming a special unpaid "medical board," with special powers of recommendation and veto.

14. A provision to protect the doctor who does valid and necessary medico-legal acts in regard to insane persons which the law authorises or directs him to do, just as a magistrate is protected in his official acts.

I could assign reasons for each of these suggestions, and refer to the States, where many of them are in successful operation, but this would unduly intrude on your space. These provisions, I think, would be good for the insane and good for the medical profession. There will be others which the public, the relatives of the insane, and the lawyers will insist on as being requisite from their point of view. A perfect Bill will be a happy combination of what is sound in the ideas of all, and will be founded on the experience of the working of past laws, on the most reliable scientific conclusions, on a generous public sentiment towards a helpless class, and on a due respect for personal liberty, with the real welfare of the insane as its keynote throughout.

I am, Sir, yours, &c.,

T. S. CLOUSTON.

The Royal Edinburgh Asylum, Morningside, Edinburgh.

*** Our correspondent has read our leaders on this subject, though all to little purpose if he has yet to learn that we have fully formulated opinions. As a matter of fact, when Dr. Clouston was pouring contempt, not too courteously, on our Commission on lunatic asylums in the *Journal of Mental Science*, we were formulating and propounding a scheme, from which he would seem to have borrowed a few ideas; to this scheme we strictly adhere.—ED. L.

To the Editor of THE LANCET.

SIR,—Among the various suggestions that have been made for the amendment of the lunacy laws there is one which I have not seen alluded to, and which in my opinion would do much to relieve the medical practitioner of his present responsibility in connexion with the duty of giving a certificate of insanity. Out of consideration for your space I will endeavour to give my suggestion as briefly as the subject, a legal one, will admit.

Among the matters provided for in the various Lunacy Acts it is ordered by Sect. 89 of 16 and 17 Vic., cap. 97, that on admission of an insane patient into any asylum or private house a copy of the order and certificates should be at once transmitted to the Commissioners in Lunacy. It is further provided by Sec. 87 of the same Act that if the order or certificates "is or are in any respect incorrect or defective," they may be amended within fourteen days, "provided, nevertheless, that no such amendment shall have any *force* or *effect* unless the same shall receive the sanction of one or more of the Commissioners in Lunacy."

On the approval or sanction of the Commissioners in Lunacy, therefore, the order and certificates *have force and effect*—that is, the amended document is endowed with certain distinct functions. What these are is explained in the next section, Section 88—namely, every person received into any asylum under an order complete in its different parts "may be detained therein until discharged as authorised by this Act," and in case of escape may be recaptured. Such are the powers alluded to as *the force and effect* of an altered or amended document, and surely they must equally belong to a document examined by the Commissioners and not requiring amendment. Again, by Section 99, 8 and 9 Vict., c. 100, it is enacted that every person authorised according to the Act to take charge of a lunatic, and who has received a proper order to do so, shall have power to detain, recapture in case of escape, and in any law proceeding which shall be brought against him for so doing, "the party complained of may plead" the authority of such order in defence, and this shall be a justification for "taking, confining, detaining, or retaking such lunatic or alleged lunatic." It is not distinctly stated, but in my idea it is implied, that the submission of the legal documents to the commissioners, for their official examination and direction for amendments, confers upon such documents an extra validity. It is ordered also by the statute that all orders and certificates relating to patients admitted since the last official visit of the commissioners or visitors shall, together with the licence in case of a private house, be laid before the commissioners, as well as all case books, admission books, &c., which shall be duly signed by them (8 and 9 Vict., cap. 100, sect. 65)—that is, everything relating to the patient, except the certificates themselves, are to be signed.

My proposition is, then, that at each visit of the commissioners or visiting magistrates, each new patient, or patients, received since the last official visit shall be specially examined, and the order and certificates relating to each case, and when found satisfactory shall be *counter-*

signed by them, and the authority of the original documents should then lapse and terminate, and the responsibility for the patient's detention rest upon the authority of the commissioners and visitors alone. This would give the assurance to the public that the patient was rightly detained, if anything will do so; and it would relieve the medical profession of a responsibility never ending according to the present working of the statutes. Everything as to the examination of the patients and signing of all the documents, *except the endorsement of the certificate*, is already provided by the Act, 8 and 9 Vict., cap. 10, sect. 62. The relief to the original certifiers by the corroboration of the legal authorities is all that is new.

I remain, Sir, yours, &c.,

Boreatton-park, Shrewsbury, Jan. 1885. W. H. O. SANKEY.

THE TREATMENT OF FOUL WOUNDS BY HOT AIR.

To the Editor of THE LANCET.

SIR,—The perusal of Mr. Leighton Kesteven's interesting paper on antiseptic steam irrigation of foul wounds induces me to offer you a description of a method of treatment by hot air that for some years I have used with marked success in cases of chronic, indolent, and varicose ulcers, syphilitic or otherwise, which are known to every practitioner, and are a source of annoyance to the patient and his friends from their offensive discharge. I employed a village carpenter to make the box I used. It is constructed of well-seasoned wood, the bottom, or floor, consisting of three layers about an inch apart from one another, the outer one of stout sheet zinc or tin plate, is that against which the flames of the spirit lamps impinge; the middle is of perforated zinc, and above that a wooden floor, also perforated by numerous holes. The apparatus is placed on the bed, and the limb put in it by lifting the two lids, which are perforated by holes for the escape of hot air and vapour; the spirit lamps, two or three in number, are lighted, and the temperature is quickly raised within the box to as great a height as can comfortably be borne by the patient, and maintained for two hours, the process being repeated morning and evening. Sprinkling the inside of the box with an ounce or so of terebene is of value in neutralising the offensive smell from a large ulcer, and also probably contributes to the stimulative effect of the hot air. In syphilitic cases calomel may be vaporised by sprinkling on the zinc floor above the lamps. Before placing the limb in the box I well wash off as much purulent matter as possible with a syringe and a solution of boracic acid. After removal from the box I apply a piece of lint cut to the shape of the wound, but a quarter of an inch smaller, and soaked in a saturated solution of boracic acid, and either no bandage or just enough to keep the lint in place. I need hardly add that the rapidity of healing will be greatly accelerated if the patient will maintain the horizontal position entirely during the treatment; in other words, keep his bed or sofa. I have found large chronic ulcers of many years' standing heal rapidly under this process, and the limb remain sound and useful for years with the help of an elastic stocking or bandage. I think both Mr. Kesteven's experience and my own go to prove that in heat we have a manageable as well as powerful stimulant which is undeservedly neglected in treating the class of cases referred to.—I am, Sir, yours truly,

January, 1885. DOUGLAS W. ESHELBY, M.D., &c.

DEATH DURING THE ADMINISTRATION OF ETHER.

To the Editor of THE LANCET.

SIR,—I am very sorry to add another to the list of deaths during the administration of ether. The facts respecting the case are as follows:—On Wednesday, the 14th inst., at 5 P.M., I administered ether to a man aged sixty-two in the receiving room of the London Hospital. It was for a dislocation of the shoulder a week old; he could bear no manipulation. I used Ormsby's inhaler and had the air-cap open to a small extent throughout the administration. The patient was fully under the influence of the anæsthetic in about the usual time, and the dislocation having been apparently reduced I stopped the administration. As the dresser was proceeding to put the strapping on I found that the reduction was not satisfactory. The man had just partially come round; so, without putting any more ether in, I put the bag again over his face. In about two minutes the reduction was completed (with the heel in the axilla), and I removed the inhaler about a minute afterwards. I observed that the man began to look pale and that his breathing had become very feeble. I ordered brandy, which was given hypodermically over the cardiac region; artificial respiration was at once commenced by one of my resident colleagues, assisted soon after by another, whilst I drew the tongue forwards. The battery was also procured and used. The dusky pallor increased in spite of our efforts, and though we continued artificial respiration for upwards of half an hour we failed to bring him round. It should be stated that at the time of removal of the inhaler on the second occasion I felt no anxiety; it was not till a minute afterwards that I observed the death-like lividity and pallor. On the first occasion there was struggling; on the second none. I had inquired as to his food previously, also as to whether he had any cough or lung trouble, as he was short of breath when I saw him, but he answered in the negative to the latter.

The autopsy was made by Dr. Turner, pathologist to the hospital, and the lungs were found emphysematous and congested. There was bronchitis with a quantity of mucus in the tubes; the lower lobes did not contain much air; at the upper part there was more œdema. Trachea congested, containing frothy secretion. Heart flaccid; right ventricle and auricle occupied by soft coagulum; great increase of fat on surface of same and very little muscular tissue; at apex it had nearly disappeared; slight thickening of valves; left side of heart normal. Pericardium universally adherent. Other organs fairly healthy. Dr. Turner considered that death had been brought about by fatty heart combined with bronchitis and emphysema. The man had about an inch and a half of fat on the abdomen. I heard afterwards that the patient had not been well at home, having fainted not long before coming to the hospital. I was assisted throughout the case by one of my colleagues.

I am, Sir, yours truly,

PROCTOR SELBY HUTCHINSON,

London Hospital, Jan. 19th, 1885. House-Surgeon.

REMARKABLE CASE OF SELF-INFLICTED WOUNDS CAUSING DEATH.

To the Editor of THE LANCET.

SIR,—With reference to your recent remarks on the conviction of Mrs. Gibbons and the medical evidence bearing on it, I beg leave to narrate the following case, which came under my observation.

In the summer of 1875 I was sent for hurriedly to see an officer. I found him lying on a couch with two incised deep wounds on the front of the abdomen, and one similar wound on the back, near the spine. Twenty-six incised wounds were found about the left breast, some of them penetrating the cavity of the thorax and others leading along the ribs; both hands were dreadfully mutilated; and lying close by the officer was a sword covered with blood and bent to an angle of about 45 degrees. He lived for several hours, and told me how he had transfixed himself by placing the hilt of the sword against the wall and then pressing forward on it; but, failing to effect his object, he made a second attempt. This time the blade, impinging on the spine, was bent, so that he had great difficulty in withdrawing it, his hands being cut severely in the effort. As death did not ensue, he then tried to penetrate the heart, but without success. A post-mortem examination verified his statement regarding the transfixion and the effects of the second effort at causing self-destruction.

Had this gentleman been found dead, I think it is extremely problematical whether any jury would have given a verdict of suicide, as such unusual power of self-mutilation is uncommon; and I am disposed to think that medical evidence would probably have tended to the idea that such wounds would not have been self-inflicted.

I am, Sir, your obedient servant,

WM. ALEXANDER, M.D.,

Aldershot, Jan. 1885. Surgeon-Major.

THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

To the Editor of THE LANCET.

SIR,—At the request of the Council of the Royal Medical and Chirurgical Society, Dr. G. F. B—— has kindly undertaken to edit a catalogue of the Society's large collection of engraved portraits of members of the medical profession. The value of the collection would be much enhanced if members of the profession would present any engraved or lithographed portraits (not photographs) of themselves or others which are not now in it. The resident librarian would have much pleasure in informing intending donors whether any portrait they may desire to present is already in the possession of the Society.—I am, Sir, yours, &c.,

53, Berners-street, Jan. 18th, 1885. BERKELEY HILL, Hon. Sec.

THE M.D. EXAMINATION AT THE LONDON UNIVERSITY.

To the Editor of THE LANCET.

SIR,—In the last number of your journal a gentleman who was rejected in logic and psychology, but who passed in medicine, at the recent examination for the degree of Doctor of Medicine at the London University, complains of having to repass in the subject of medicine should he determine to present himself once more for examination. Surely, Sir, this is an undignified complaint in one who aspires to a good degree. If the examiners found this gentleman well up last December, surely they should find him still better up next December. Are we to consider him "learned in medicine" whose knowledge vanishes within a twelvemonth? I myself was rejected in logic and psychology at the recent examination while passing in medicine, but I hold the degree I covet at too high an estimate to take the schoolboy view of your correspondent. I, for one, have no sympathy with those who would lower the standard of any medical examining body, and certainly not of a university which has done more, I believe, to further medical education than any other institution in the world. If anyone should doubt this remark, I have only to refer him to the Medical Directory, and let him travel through the list of names. In regard to a teaching University in London, I am not surprised at the cry for it, since many of the London hospital schools make no attempt at teaching, at all events at clinical teaching. In spite of the many remarks made to the contrary, I directly contradict the statement that our clinical teaching is unrivalled. I would ask any unbiased person to "walk the London hospitals" in the true sense of the word, and I contend that he will count the clinical teachers of medicine on the fingers of one hand. If then London would draw men away from Edinburgh they must look to their teaching staff. It is simply foolish for us to shut our eyes to the fact that we are in this respect behind Edinburgh. We have in a somewhat cowardly fashion, I think, been railing against the easiness of the Scotch (and among others the Edinburgh) University Examinations, without giving due prominence to the other side of the question. There is another point, I think, which has been overlooked, and it is that, apart from all other considerations, the men of the north of England go to Edinburgh, and other Scotch Universities, from simple nearness, just as the men of the south chiefly go to London. It is only in the nature of things that north Englishmen should tend to go to a near university, whether it be English or Scotch. Trusting, Sir, that my remarks will offend none,

I am, faithfully yours,

January, 1885. M. B.

PARIS.

(From our Paris Correspondent.)

A NEW SOCIETY.

A NEW Society is being formed through the initiative of some of the leading surgeons of Paris, and the committee of organisation is composed as follows:—Professor Trélat, President; Professor Verneuil; Dr. Hurteloup, hospital surgeon; Professor Chauvel, of Val-de-Grâce; Dr. Bouilly, agrégé, hospital surgeon; Dr. Charles Monod, agrégé, hospital surgeon; Dr. S. Pozzi, agrégé, hospital surgeon, secretary of the committee. The Society is to be named the "Congrès Français de Chirurgie" and the statutes begin with the statement that the object of the Society is to establish scientific relations between the national or foreign savants and practitioners who interest themselves in the progress of French surgery. A meeting is to be held annually in Paris during the Easter week, but the period may be altered according to the decision of the Congress. All qualified practitioners are eligible as members, and the subscription for each is twenty francs a year. Each member will be entitled to the volume of the "Comptes Rendus" of the Congress. A donation of 200 frs., paid before Feb. 15th, 1885, will give the member the right to the title of founder. If the amount be paid after that date the subscriber will become permanent member (membre perpétuel), and he will be exempt from further payment or annual subscription. The subjects proposed for the first meeting, which is to be held in Paris during the ensuing Easter week, are:—1. Etiology and pathogeny of surgical affections. It is desired that clinical facts and experiments which may contribute to the determining of the respective rôles of the figured ferments (microbes, &c.) and of the chemical poisons (ptomaines, &c.) in the pathogeny of septicæmia may be brought forward. 2. Indications that may be furnished to surgical practice by the examination of the urine. 3. The best dressings to be employed in military surgery in the field. 4. The treatment of cold abscesses: to distinguish between the treatment of ossifluent cold abscesses and that of cold non-ossifluent abscesses. 5. Operative indications in deep Wounds of the Abdomen. Besides these subjects, chosen by the Committee of Organisation, the following are recommended:—(1) The comparative value of an iliac anus and a lumbar anus in cancer of the rectum; (2) indications for gastrostomy; (3) origin and nature of coxalgia; (4) indications for trephining the skull in traumatic lesions; (5) the treatment of the pedicle in ovariotomy and hysterotomy; (6) the operations on tumours included in the broad ligaments. All subscriptions and communications are to be forwarded to Dr. Pozzi, 10, Place Vendôme, Paris, from whom any further information may be obtained.

SUPPOSED POISONING BY COLCHICIN.

Colchicin, the active principle of the seeds of the colchicum, recently discovered, is a most powerful poison, and has not till now, I believe, been adopted for criminal purposes, although the other preparations of the plant, when given in moderate doses, possess known therapeutic properties of great value. The extreme toxic nature of colchicin has been taken advantage of by a manufacturer of artificial flowers in Paris, who obtained the drug by surreptitious means under the pretence of requiring it for the purposes of his trade, ostensibly for dyeing flowers of a violet hue, but it is supposed that in reality it was for a criminal purpose, as circumstances have occurred which lead to the suspicion that he used it to poison his first wife, who died a short time ago, and who had been buried only a few weeks when he married his present wife, a girl of eighteen. From the smattering of chemistry that the florist had, he hit upon colchicin as being the most convenient for his purpose, as no trace of the presence of the alkaloid was found in the body after death. This circumstance, coupled with the symptoms with which his wife died, excited some suspicion at the time, which has been increased by the fact that the man had, shortly before her death, made two unsuccessful attempts to obtain the alkaloid at chemists' shops; and as the cause of death by the administration of this drug is as yet only an assumption, the body of the supposed victim is to be exhumed and submitted to an examination. I may here note that a chemist, writing on this subject, describes colchicin as a salt crystallised in the form of fine needles, without odour but of a bitter taste. It dissolves in water and in alcohol. One centigramme in solution killed a cat in a few hours. At the autopsies of the animals so treated the stomach and the digestive tube were always found to be excessively inflamed, just as if the parts were burnt. Meanwhile the accused man is under arrest, and the case is being thoroughly investigated.

THE FATE OF LOUISE MICHEL.

Louise Michel, the well-known socialist agitator, who is now in prison, is reported to be in a state of mind bordering

on insanity, which manifests itself by great nervous restlessness, hallucinations, starting in her sleep, and constant terror of being attacked by troops. In fact, her brain is evidently affected, and she is therefore to be transferred to a "maison de santé" to undergo appropriate treatment.

Paris, Jan. 20th.

VIENNA.

(From our own Correspondent.)

THE VIENNA MEDICAL SOCIETIES.

THE scientific activity of the diverse Medical Societies in Vienna, the first rank amongst which must be assigned to the I. a. R. Society of Physicians, has satisfactorily increased in the past year. The Society of Vienna Doctors (Wiener Medizinisches Doctorencollegium) have abandoned their original intention of competing with the I. a. R. Society, and now restrict themselves to reports on the progress in the different theoretical and practical branches of professional education in the place of the former lectures on original researches, a programme which proves acceptable. At the "Section Vienna" of the Union of the Lower Austrian Physicians, also, instructive meetings have of late been held. At one of these meetings Professor Stricker demonstrated his theory of inflammation and the circulation of the blood, by means of excellent microscopic views projected on to a wall of the room by the electric lamp. At the last meeting of this Society Professor Billroth discussed the antiseptics used in his clinics, and expressed the opinion that surgical success depended, not on antiseptics, but solely on the most scrupulous cleanliness.

THE EFFECT OF IODCOLLODIUM.

Strikingly different from the usually quiet sittings of the I. a. R. Society of Physicians was the last one of the past year. Seldom, perhaps never, has a sitting of this Society been the scene of such a passionate debate, and only the tact of the chairman, Professor Billroth, and the admirable moderation of Professor Albert, prevented the occurrence of a scandal. The order of the day was a lecture by Professor Weinlechner on the application of iodcollodium, in which he spoke of the prosecution of the late Dr. Spitzer, at whose trial he acted as expert, and by his evidence principally caused the condemnation of the defendant. Dr. Spitzer ordered a girl to apply iodcollodium (1 to 100) as a remedy for red hands. The girl's mother painted her little finger daily, but at the end of three weeks the finger became gangrenous, and had to be amputated. At the trial of Dr. Spitzer, he was, on the testimony of several physicians, sentenced to pay a large fine, and to forfeit the right of practising his profession. Dr. Spitzer appealed, and the Upper Court ordered that the opinion of the medical professors of the Vienna University should decide the case. Professor Albert, who had to report on it, exonerated the accused from blame, whereupon the Upper Court confirmed his decision and reversed the original verdict; but, meanwhile, Dr. Spitzer, in a fit of despair, had thrown himself into the Danube. In his lecture Professor Weinlechner tried to prove that the painting with iodcollodium of a finger, be it annular or in the form of a glove-stall, must necessarily cause gangrene, and that his evidence involved no injustice against Dr. Spitzer. He stated that he made his experiments with a child's supernumerary finger, which was curved like a hook. Professor Weinlechner alleged that this finger, which he painted twenty-three times with iodcollodium (1 to 100), had become gangrenous, but Professor Albert easily succeeded in removing the coating of iodcollodium which covered the top of the finger, and showed that the digit remained quite intact, being only made brown by the iodcollodium, and that no furrow of demarcation could be detected. Professor Weinlechner was forced to agree that in this instance gangrene had not occurred, but expressed the opinion that there was still a possibility of its occurrence later on. During the debate Professor Weinlechner repeatedly attacked the decision of Professor Albert, for which, pushed hard by his opponent, he afterwards apologised. Professor Albert stated that in the whole of medical literature no warning is to be found against the application of iodcollodium, and that in the case of Dr. Spitzer an injustice had been committed. At the first sitting in the new year Professor Weinlechner showed the preparation of the supernumerary finger, which had, meanwhile, been amputated. The finger, after having been repeatedly painted with iodcollodium, became swollen, bluish-red in colour, and its top gangrenous; the nail fell off and pustules covered it. The Society, however, seemed no longer inclined to debate afresh on this subject. This lamentable affair, which caused the suicide of a colleague, and reflected seriously on the reputation of another, admonishes us to be cautious in applying new medicaments.

COCAINE.

As to cocaine, something of interest can be communicated. Zuntz, in Berlin, lays stress on the fact that cocaine is an effective poison, and that from two to four centigrammes of it kill rabbits, and five centigrammes prove mortal to dogs. The Vienna oculists and laryngologists, however, have had many successes in applying it. Professor Störk praises the anæsthetic effect of the cocaine on the pharynx and on the larynx, although he was twice unsuccessful with two individuals who were so excessively irritable that the application of cocaine did not facilitate the introduction of instruments into the larynx. Into the ear of a patient who was dull of hearing, and suffering especially from a humming in the left ear, he dropped a solution of cocaine (20 per cent.). The next day the patient related that several minutes after leaving the hospital he was overtaken by such a swimming in the head that he could not stand upright, and had to be supported to escape falling. Another application of a solution of cocainum muriaticum (2 per cent.) is worth mentioning, owing to its striking success and to the simple manner of the application. An individual who scalded himself with hot water, and had already blisters on the skin, suffered intolerably from the pain caused thereby. After fruitless attempts to afford him relief by the usual means the solution of cocaine was applied, and the pain immediately ceased. Cocaine applied to the eye causes widening of the rima palbebrarum. Dr. Koller attributes this effect to the insensibility of the cornea, whilst Dr. Königstein presumes an irritation of the sympathetic which enters the superior and inferior palpebral muscles. The Vienna dentists, too, apply the cocainum muriaticum. Even a solution of cocaine of 2 per cent. applied to sensible dentine renders it less sensible after one or two minutes. Cocaine mixed with glycerine to the consistence of a paste and then applied to a carious tooth renders it insensible, sometimes in the course of only ten minutes. This proceeding is especially to be recommended in the case of children.

THE BACILLUS OF MALLEUS HUMIDUS.

Schütz and Löffler have proved the existence of this bacillus, which is similar to that found in tubercle but differs from it in possessing a specific tincturing power. Several days afterwards Bouchard in Paris, too, described micro-organisms as the cause of malleus humidus. These micro-organisms were said to be roundish, somewhat elongated formations, cocci, which are constantly in lively movement in the liquor, and finally group themselves in the form of chaplets. These researches were made solely with animals affected with glanders. Several days since a female rag-picker was conveyed to the Vienna Hospital Rüdolfsstiftung. On her face and body were pustules somewhat larger than variola pustules, besides nodules in the skin and in the subcutaneous tissue, from which matter oozed. Malleus humidus was diagnosed, and Dr. Weichselbaüm found in the matter from the pustules, as well as in the discharge from the nose, in the blood, and in the urine of the patient, the same bacilli as Schütz and Löffler had described. Weichselbaüm tried, with complete success, pure cultures of this bacillus on flesh-peptongelatine, on flesh-pepton, agar-agar, and on potatoes. The cultures grow slowly at ordinary temperatures, but very quickly at the temperature of the blood. On sterile potatoes the bacillus forms, first, light-brown, and then dark-brown, colonies. Even the formation of "Sporen" could be remarked; and, finally, little wands ("Stäbchen") were seen, which dissolved and resembled cocci grouping together. All inoculations with the latter cultures into rabbits, sea-hogs, sheep, &c., produced malleus humidus. Consequently, Dr. Weichselbaüm is of opinion that these bacilli are those of malleus humidus. As to the micro-organisms of Bouchard, he points out that the French inquirer employed broth for his cultures, and doubtless made his inoculations with polluted material. Professor Csokor, of the Vienna hospital for animals, lecturing on the 9th inst. on Glanders and on Tubercular

Consumption of Horses, referred to these researches. As to the bacillus, he said he was not in a position to agree entirely with Schütz's statements. He did not find any specific quality in Schütz's bacillus. That it forms "Sporen" is not surprising, as all bacilli which multiply according to the leptothrix form do so. If all error is to be excluded, the researches must be made when the object is still fresh or mixed with glycerine, or with magdala-red, nor must it have been heated or dried previously.

Vienna, Jan. 12th, 1885.

Obituary.

EVAN BUCHANAN BAXTER, M.D. LOND., F.R.C.P.

EVAN BUCHANAN BAXTER was born in 1844 at St. Petersburg, where his father, James Baxter, had resided for some years as a high official in the Education Department of the Russian Government Service. His father, a personal friend of Christopher North, was descended from an old Scotch Presbyterian family. In early manhood he had removed to Russia, and there married a Miss Ross, the daughter of a Scotch merchant who had settled in St. Petersburg, and of this marriage a daughter, who died in infancy, and Dr. E. B. Baxter were the only children. His mother died whilst he was still very young. His father also directed the English school at St. Petersburg during his residence there, and here Evan began his education. Soon afterwards, on being appointed Government Inspector of Schools in the province of Podolsk, Russian Poland, his father took up his residence at Kaminetz, where Evan was brought up and educated until the age of sixteen under the care of his parent and an old French tutor. To this early training, so different from that of an English public school-boy, many of the characteristic elements in his thoughts and actions must be ascribed. In October, 1861, he came to England, and entered the General Literature and Science Department of King's College. At that time he was a good English, German, French, and Russian scholar, and had read and appreciated most of the best literature in those languages, and had also a good knowledge of many of the Latin classics. He was then quite unacquainted with Greek. A friend writes, "He and the late Professor Clifford joined about the same time as myself, and both showed themselves distinctly superior to the rest of us." This was in one of the most flourishing periods in the history of the General Literature Department of King's College. In 1862, having made rapid progress in Greek history and literature, he obtained an open scholarship in classics at Lincoln College, Oxford, and stayed there for three terms. His college tutor was the present Professor Nettleship; and his intimacy with his tutor's brothers and family remained close and cordial until his death. His great ambition then was to become a classical scholar and Fellow, for which his linguistic accomplishments singularly well fitted him. His university career, however, was interrupted by the prolonged illness and the death of his father. He returned to Russia to nurse and attend him. On coming back he felt that he could not resume his place in College—for his scholarship had lapsed in his absence—even if his views had not undergone very material changes in the interval.

Before leaving England, and whilst in Russia, he had studied deeply philosophical literature and the doctrines of the Positive school; and this, with other circumstances, determined him not to return to Oxford. "The only profession," he said, that attracted me was that of medicine, holding out as it did an opportunity for the study of physical science and a hope of comparative intellectual freedom." And so in October, 1864, he entered the Medical Department of King's College, and obtained the first Warneford Scholarship on his entrance. In 1865 he was elected a junior scholar with the late Professor A. H. Garrod and Professor Curnow, and in 1869 gained the first Warneford Prize. Whilst in the Medical Department, in 1865, he was awarded the Dasent Prize (open to the whole College, for an essay on some historical or literary subject which should be distinguished by accuracy of composition and elegance of style, and usually won by students in general literature). The subject for the essay was "The Minor Poems of Milton." In 1868 he was appointed assistant house-physician to King's College Hospital, and 1868-69 he filled the office of house-physician. In 1870 and 1871 he became Sambrooke Medical Registrar to King's College Hospital; and the conscientious exactitude with which he performed his duties was blended with such unobtrusive kindness in unofficially teaching his juniors that he is most gratefully held in remembrance by them as an example of what a typical senior student may do in such a position. It was at this time that he began to be appreciated as not only a man of the first intellectual calibre, but also as a great teacher and an extraordinarily careful clinical observer.

In 1865 he matriculated in honours at the University of London; in 1866 and 1867 he passed the Preliminary Scientific and First M.B. Examinations; and in 1869 graduated M.B., obtaining the Scholarship and Gold Medal in Medicine and the Gold Medal in Midwifery. In the next year, at the examination for the M.D. degree, he was marked with a star as worthy of the Gold Medal for General Proficiency.

In 1871 Dr. Baxter was appointed Medical Tutor at King's College, and he held this post until 1874, when he was chosen as the successor to Professor Garrod in the chair of Materia Medica and Therapeutics, and as an assistant physician to King's College Hospital, and these offices he held until a month or two before his death. In 1872 he became a Member of the Royal College of Physicians, and in 1877 was elected a Fellow. (He had been elected an Honorary Fellow of King's College two years previously.) He was subsequently appointed an Examiner in Materia Medica and Therapeutics, and he also filled for five years the corresponding office in the University of London. Whilst still tutor to King's College he was elected on the medical staff of the Evelina Hospital for Sick Children on its foundation, and he worked diligently but unostentatiously at the diseases of children for the next nine or ten years, first in the out-patient rooms and then in the wards. In the intervals between his medical classes he translated Rindfleisch's "Pathological Histology" for the New Sydenham Society, edited the fourth edition of Garrod's "Essentials of Materia Medica," and made some valuable experiments with the "Cinchona Alkaloids on Bacteria and Colourless Blood-Corpuscles," which were published in the *Practitioner* in 1873. His accurate knowledge of technical pathology and his choice incisive English enabled him not only to give a faithful translation of Rindfleisch's work, but to present English readers with a more readable book than the original, and marked by an elegance of style such as is rarely met with in a translation of a German scientific work. In his edition of Garrod's "Materia Medica" he preserved every characteristic which has made this text-book so popular, and he added to it many notes on physiological therapeutics, so that for accuracy and conciseness it still stands pre-eminent. Subsequent researches have scarcely modified any of Dr. Baxter's careful statements. His experiments on bacteria and the colourless blood-corpuscles show his excellence as a microscopical observer, and were remarkable for their originality, precision, and completeness, and for the painstaking labour which they must have involved. In consequence of these researches he was asked by the Medical Officer of the Privy Council to carry out a series of inquiries, on the same lines as the preceding, into the value of disinfectants, and his results were embodied in the Report for 1875. In a review of his paper in this journal on April 1st, 1876, it is remarked, "Dr. Baxter has been enabled to arrive at definite quantitative results as to their efficacy against the different poisons, and thus to supply us with most important experimental data on which to found our disinfectant operations."

In the next year he wrote an article in the *British and Foreign Medico-Chirurgical Review* on the vaso-motor nervous system, which showed a complete mastery of the history and position of the subject at that time. In it he pointed out how far our hypotheses were from including all the facts in this branch of physiology, and how great must be our caution before we invoke its aid in explaining our daily clinical and pathological phenomena, and the modes of operation of our therapeutical agents. His large and accurate knowledge of skin diseases, derived from many years' work at the Blackfriars Hospital, at first under the instruction of Mr. Jonathan Hutchinson, is demonstrated in the paper on "General Exfoliative Dermatitis," which he contributed to the *British Medical Journal* in 1879. His lesser writings include a series of physiological notes with which he supplied the *Academy* for many years, and these are remarkable for their condensation and the clearness with which difficult and complex questions are placed before the general reader.

He also reviewed some biographical works for the same journal. In March, 1880, in conjunction with Dr. Willcocks, then medical registrar to King's College Hospital, he published a series of observations on the number of red corpuscles in the blood, and their chromometric value in health, acute febrile diseases, chronic diseases, and in those pathological conditions in which the blood is either the primary seat of the morbid process, or, at any rate, the theatre of its most conspicuous manifestations. Here, again, the charm of precision and of an exact quantitative procedure is well shown. A short note in *Brain* of January, 1884, welcoming the appearance of a Russian review devoted entirely to Neurology, was his latest literary work. In 1874 he married a lady who had been a nursing sister in the Franco-German war and in King's College Hospital, who survives to mourn her sad loss.

In 1881 Dr. Baxter was appointed Physician to the Royal Free Hospital, and the charge of instructing the lady pupils in clinical medicine was placed in his hands. He performed the duties most devotedly, fully believing that our profession should be open to both sexes, and the ladies could scarcely have had another physician as a teacher who would have so well combined courtesy and gentlemanly feeling with the knowledge of a thorough all-round clinical physician and the skill of a practised teacher.

Dr. Baxter attended most assiduously to his duties at the Council of the Pathological Society, at the Medical Board of King's College, and at Committees on Therapeutics at the Royal College of Physicians; but he was an infrequent visitor at the general meetings of our Medical Societies. The principal occasion on which he took an active part in the proceedings was in the debate on Rickets, at the Pathological Society in 1880. We may recall his appearance as a speaker unknown to a large number of his audience. A tall, delicate gentleman, of somewhat fragile physique, with a slight but perceptible stoop, well-proportioned and well-poised head, with dark hair turning grey, falling straight and smooth, and somewhat thinly scattered. His forehead was high and square, and clearly betokened a markedly intellectual and thoughtful mind; while the delivery of his well-balanced sentences accentuated the impression that a speaker above the ordinary was engaging the attention of his audience. His deep-set, penetrating, bluish-grey eyes, hidden by spectacles, his long aquiline nose, delicately shaped ears, small nervous lips, and finely cut chin, with a small moustache and whiskers, and an elongated squarely-cut beard tinged with grey, gave a characteristic Oriental rather than English cast to his appearance. His profile, especially when lit up by a smile, was strikingly handsome. He had fine hands, with long tapering fingers and filbert nails, and small feet. His presence was altogether most striking, and can hardly be fairly depicted to those to whom he was personally unknown. At that meeting he gave proofs, with his accustomed precision, that starch-feeding in 92 per cent. of the cases observed by him at the Evelina Hospital had preceded rickets, but he also pointed out the objections against the hypothesis that this was its only cause. The rigorous deductions that he drew from all his observations, and the cautions that he enforced against their absolute adoption, cannot be better shown than in this address.

We would supplement this description of how he appeared to his medical contemporaries by noticing some characteristics well known to all who were his personal friends. In investigating a clinical case, Dr. Baxter was most methodical: he first heard the personal history, inquired into the family history of the patient, and afterwards made a thorough physical examination. It was only then that he came to a conclusion as to the diagnosis, and he pursued the same method however trivial the case might seem to be. He was as minute and thorough in laying down the plan of treatment, and he insisted on every detail which he ordered being systematically followed. After he had examined a patient, he became dogmatic as to the nature of the disease, and the requisite regimen and diet which would cure it or alleviate its symptoms, and it was remarkable to see how implicitly his patients carried out his wishes and how thoroughly they believed in his prescience and judgment. The method which he adopted for ascertaining the nature of the affections for which his private patients consulted him was carried by him into hospital practice. Here, also, his examination was most thorough and his directions for treatment most precise, and it is especially in this particular that all who began to investigate and treat diseases under his supervision at King's College and the Royal Free Hospitals will have to recall his memory with lively feelings of gratitude. He exhaustively examined every case under his care. In addition to being a well-trained general physician, he was a well-versed specialist in cutaneous and nervous diseases, and could use the ophthalmoscope and laryngoscope with easy familiarity, whilst his knowledge of therapeutics and physiology was almost unique. As a lecturer, we need only say that students often attended his lectures on Materia Medica twice, and even thrice, so great was the attaction of his style, and so clear was his exposition of the many details embraced in his course of lectures.

His personal gifts were so numerous, his courtesy so like a remanet from a former generation, his humour so marked and yet so grave, that all who came within the boundaries of his charmed circle distinctly felt better men from being influenced thereby. A physician after the type of Graves and Trousseau; a *littérateur*, whose exquisite and well-balanced periods were chosen from an accurate knowledge of Dante, Goethe and Schiller, Turgénieff, Voltaire, Corneille and Racine, Chaucer, Spenser, Milton and Addison, besides the most important Latin and Greek classics and the best modern English writers; a scientist, with accurate information as to the history of modern medicine; and a man, modest and retiring, ever giving place to others, and whose acquaintance was the joy of a select number of friends,—such is a bald estimate of the man who has just passed away.

The history of his illness is briefly as follows:—He was always delicate, and early in his English life suffered from bronchitis; his digestive powers were feeble, and for many years he had suffered occasionally from attacks of intestinal colic, which increased in frequency before his fatal illness. In February, 1883, he felt weak and out of sorts, and unable to do his work as well as formerly, and towards the end of that month he was laid up with right pleurisy, with some effusion, from which he slowly recovered and was able, but with difficulty, to lecture in the summer session of 1883; in September the intestinal trouble became rather urgent and continued so throughout his life. In January, 1884, an attack of left pleurisy set in, but he again lectured throughout the summer session. In the autumn there were signs of breaking down at the apices of the lungs, and these were soon followed by albuminuria. Œdema of the legs was noticed in November, and late in December diarrhœa, almost uncontrollable, left him but little remaining strength. On the 12th inst. attacks of dyspnœa began, suggesting cardiac thrombosis, and these continued until his death, early on the 14th. He was quite conscious until a few minutes before his decease.

In conclusion, the first element of his character and the mainspring of his life and actions cannot be better expressed than in a quotation from the letter of an old friend. "I never knew him hint, or say, or suggest the slightest toleration of anything but what was honest, honourable, and just. He was without exception the *most accurate* man I ever met. I never knew him state anything as a fact which was not the fact and capable of verification. He was never inexact or exaggerated." His views on medical questions are clearly stated in an address to the King's College Medical Society in 1870 on Medicine and the Allied Sciences. "The advancement of medicine at the present day depends mainly on *scientific investigation*—on investigation conducted according to the received methods of biology; *the perfecting of the individual practitioner* in clinical study. With the latter, science has little or nothing to do; with the former, its connexion is most intimate." His elegance of style, precision in the choice of words, and wide culture may be gathered from the concluding sentences of that address: "To nearly all of us it is an educational instrument in the widest sense—our only chance of culture. To nearly all of us, medicine is not only an occupation, but a life. And in the recognition of this, that our occupation and our life are one, lies at once the acknowledgment of our shortcomings, and a ground of hope for further action. Stronger motives than those of mere ambition or curiosity stimulate us to exertions which, but for them, would seem too hard. The mastery over the past is of no avail, save as it gives us a key to the future. We should be like those early voyagers who, starting from their well-known home in some northern island, were drawn ever onward by the vision of some mythic El Dorado or Fountain of Perpetual Youth. This, indeed, they never reached; but

in their passage through warmer seas, into the atmosphere of the unknown, they were not left without reward, for every morning brought with it new horizons; every night, new stars." J. C.

H. T. LANCHESTER, M.D. LOND., F.R.C.S. ENG.

IT is with feelings of painful regret that we record the death on the 8th inst., from acute pneumonia, of Dr. Lanchester of Croydon, at the age of forty-six. Although comparatively young, he had attained a position that it is given to but few to reach even at the end of a long career, and his premature decease is justly regarded in Croydon and its neighbourhood as a public calamity.

Born in 1838 at Yoxford, in Suffolk, where his father, who survives him, was then in practice as a surgeon, he was educated at the North Walsham Grammar School, and afterwards apprenticed to a leading general practitioner at Banbury. In 1858 he entered as a student at St. Bartholomew's Hospital, and had for his senior teachers Sir George Burrows, Sir William Lawrence, Sir James Paget, Dr. Baly, and Dr. Kirkes. Regarded as one of the ablest men of his year, he was much noticed by the different members of the staff, especially by Burrows and Baly. In the wards of these physicians he worked assiduously, and in intimate association with, as fellow-students, several members of the present staff of the hospital, besides many others, amongst whom may be particularly mentioned Dr. Horace Jeaffreson of Wandsworth, and Mr. Edwin M. James of Melbourne. On leaving St. Bartholomew's he was appointed resident medical officer at the Victoria-park Hospital, where he remained for nearly three years. While he was working here with the late Dr. Peacock and with Sir Risdon Bennett his mind was strongly directed towards the study of diseases of the heart and lungs, in which in after years he gained so wide a reputation. Having taken the degree of Doctor of Medicine at the University of London and the Fellowship of the College of Surgeons, he went, on the special recommendation of Sir James Paget, to Croydon as assistant to Dr. Carpenter and Mr. Whitling. Though still very young and holding a subordinate position, he quickly made his mark, for he was able, shrewd, clear-headed, active, full of tact and sound judgment, and of indomitable perseverance. Socially, he became very popular, and widely known as a man of large views and general culture, while many were attracted by his knowledge of and taste for literature and art, by the charm of his manner, his absolute integrity of thought and act, his keen sense of humour, and his power of turning an argument by some story or anecdote well chosen and admirably told. It was soon found that his services were indispensable, and he joined Dr. Carpenter and Mr. Whitling as their junior partner. In 1872 he married the only daughter of Mr. Page of Lincoln: she is now left with five children to mourn their loss. As time went on Dr. Lanchester's position at Croydon grew year by year more prominent. He was elected surgeon to the Croydon Hospital, and became connected with many charitable and other institutions of that town, and surgeon to the Second Surrey Volunteer Corps. He took a leading part in the affairs of the south-eastern branch of the British Medical Association, and for several years acted as honorary secretary, the duties of which office he performed with such ability that on his retirement he was presented, at Reigate, with a very handsome testimonial. Many will remember the happily-turned speech which Sir George Burrows delivered on this occasion. In 1878 he was elected President of the branch, and amply justified the anticipations which had been formed on all sides of his fitness for the appointment. Dr. Lanchester was also a member of Council of the Medical Benevolent College at Epsom, and chairman of the new Alfred Wing Committee of the Croydon Hospital.

While never assuming or accepting the position of a public man, he yet found time to take part in a variety of good public works. A Liberal in politics, he became vice-president of the Croydon Liberal Association, and in 1874 he was elected to a seat on the School Board, of which, with a temporary break in 1877, he had ever since been a member. At the last election in 1883 he was returned at the head of the poll, and was soon afterwards made vice-chairman of the Board and chairman of the Finance Committee. In this latter office he rapidly gained a high reputation as a financial authority. His fatal illness appeared to take its origin in a chill caught at a meeting of the committee of the Whitgift Foundation, of which he was a governor.

It will be seen from this rapid and imperfect sketch how great an amount of work Dr. Lanchester contrived to accomplish. Never robust in health, it was a matter of surprise to all who knew him that, surrounded on every side by constant claims upon his time, he was able not only to discharge the duties of a busy practitioner, who always made his patients, whether rich or poor, his first care, and to keep himself well abreast with the progress of medicine, but also to perform punctually and without confusion or omission the duties of a variety of public appointments. Yet he did so; and that with a steadiness of purpose which made everyone respect and value his opinion, and with a spontaneous courtesy and light-hearted and humorous good-nature which won the regard and affection of all with whom he was brought in contact. Probably no man ever left behind him a more unanimous opinion of his worth. With intellectual endowments that placed him on an equality with the ablest minds in the wide circle in which he moved; with a kindness and warmth of heart the presence of which caused jealousy and rivalry to be disarmed and forgotten; with an unchallenged reputation for honourable feeling, rectitude, and candour; and with a plainly indicated aversion, not to say impatient contempt, for all that was unfair or disingenuous, it is no mere posthumous flattery to say that his was a rare and lofty character. It was not in his nature to do a questionable act or to follow a questionable course. His name is one that will long be held in honour.

During his last illness, which was of less than a week's duration, Dr. Lanchester was attended by Dr. Andrew of St. Bartholomew's Hospital, Mr. Whitling, Dr. Horace Jeaffreson, Dr. Duncan, Dr. Richardson, and Dr. Oscar Clark. It was unanimously agreed to accord him a public funeral, which took place on the 12th inst., and which was attended by the mayor (Mr. J. Cooper), the deputy-mayor, and other officials of the Corporation; by deputations from the Croydon General Hospital, the Literary Institution, and other public bodies; by a detachment of the Volunteer Corps, by a very large concourse of the principal inhabitants, by his late partner, Mr. Whitling, and by numerous professional and other friends, many of whom had come from a long distance in order to be present.

THE SERVICES.

WAR OFFICE.—Medical Staff: Brigade Surgeon William Cathcart Boyd is granted retired pay, with the honorary rank of Deputy Surgeon-General; Surgeon-Major Richard William Forsayeth is granted retired pay, with the honorary rank of Brigade Surgeon; Surgeon-Major Robert Hyde is granted retired pay, with the honorary rank of Brigade Surgeon.

ADMIRALTY.—The following appointments have been made:—Staff Surgeon Isaac H. Anderson, to the *Wild Swan;* Surgeon John Dowson, to the *Briton;* and Surgeon Evan St. M. Nepean, to the *Revenge.*

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following candidates passed the Primary Examination in Anatomy and Physiology for the diploma of Member at a meeting of the Board of Examiners on the 8th inst.:—

ANATOMY AND PHYSIOLOGY.—John F. Blurton, Frank Hues, and C. Herbert Harris, Birmingham; Edgar A. Field, Wm. R. Porter, and Walter W. Chamberlain, Edinburgh; Frederick W. Burnett, Louis Demetriadi, H. Newman Pullan, and Benjamin Wainman, Leeds; John Garth, Liverpool; John Blacklock, Joseph A. Jenkinson, and Richard Bilsborrow, Manchester; W. Drewett Arnison, Newcastle-upon-Tyne; Dominick A. D'Monte, Bombay and Edinburgh; Bertal H. Scott, Toronto; David Roxburgh, Glasgow; H. Leeds Harrison and Matthew H. Spencer, Cambridge; W. Gabriel Rockwood, Madras.

ANATOMY ONLY.—Norman Davis and Isaac G. Modlin, Newcastle-upon-Tyne; H. Harlow Sales, Leeds; H. Foreman Cartmel, Manchester.

PHYSIOLOGY ONLY.—T. Willford Scott, Cambridge; James E. Brown Toronto; Jasper J. Garmany, New York.

(Candidates referred for three months, 5; six months, 3.)

Passed on the 9th inst.:—

ANATOMY AND PHYSIOLOGY.—H. Edward Gough, Paul de Cressé Potter, E. Meyer de Jong, and George W. Dowling, Manchester; Chas. J. Acton, G. Lewis Travis, and T. Makins Draper, Liverpool; A. Spiers Alexander and Leonard Williams, Glasgow; E. Brereton Hill, Cambridge and St. Thomas's Hospital; Preston King, Arthur H. Williams, and E. Mellor Light, Cambridge; G. R. Scott Banbury and Francis F. Jones, Bristol; A. Owen Davies, Edinburgh; Oliver Norris and F. P. Roesch James, Leeds; W. H. Helm, Leeds and Edinburgh.

ANATOMY ONLY.—A. Seymour Taylor, Newcastle-upon-Tyne; J. Ellison Finnie, Liverpool; S. H. H. Dowse, Dublin; P. Allison Linnell, Manchester; Herbert Clapham, Sheffield.

PHYSIOLOGY ONLY.—W. Mitchell Branson, Sheffield.

(Candidates referred for three months, 9; six months, 2.)

Passed on the 12th inst.:—

ANATOMY AND PHYSIOLOGY.—F. Mark Davies, Madras; F. Abraham Le Mesurier and J. Borrill Close, St. Bartholomew's; Upendra K. Dutt, St. Mary's; J. Kingham Reeves, Guy's; Charles E. Dawson and W. Brakenridge Pettitt, Leeds; Charles T. Samman and Morgan J. Rees, London Hospital; A. Knowles Ludlam, Manchester; A. Hugh Benson and S. Butler Day, Bristol; Ernest T. Habijam, Edgar H. Lingwood, and W. H. Compton, Charing-cross; J. Lea Henstock and J. Cobden Williams, Liverpool; Herbert W. Maclure, Cambridge; Frederick W. Hildyard, St. George's; W. C. Brown, Newcastle-upon-Tyne.

ANATOMY ONLY.—Charles H. Smale, Manchester; Albert Norman, Guy's; George Dunn, Bristol and St. Bartholomew's; Phillip J. Le Riche, University College; Wm. H. Hillyer, St. George's.

PHYSIOLOGY ONLY.—John H. Lister, Leeds; Edmund Cairtley, Cambridge.

(Candidates referred for three months, 5; six months, 3.)

Passed on the 13th inst.:—

ANATOMY AND PHYSIOLOGY.—W. Henry Blake, University College; W. Harmsworth Savory, H. Pywell Daniell, F. Augustus Watkins, and Brereton S. G. Nightingail, St. Bartholomew's; Henry Saunders, John Hewan, and W. Lloyd Mathias, St. Thomas's; Edwin H. Blake, J. Joseph Lewington, Geo. H. Francis, and Alban H. Moxon, London Hospital; W. Arnison Slater and A. Zell C. Cressy, Guy's; W. Grant Reily, Middlesex; Thos. A. Grieves, St. Mary's; Edward Cooper, Charing-cross; W. Arthur Griffiths, Westminster.

ANATOMY ONLY.—F. Jesser Wadham, St. George's; Sidney E. Rossiter, P. Vernon Dodd, Geo. E. Saunders, and Ernest Loveday, St. Bartholomew's; H. Ferrers Knyvett, Walter E. Kelbe, Courtney J. Fuller, and A. R. Field Evershed, Guy's; L. N. Hoysted, Charing-cross.

PHYSIOLOGY ONLY.—H. W. Rogers, London Hospital; Alfred Bowles, University College.

(Candidates referred for three months, 4; six months, 2.)

Passed on the 14th inst.:—

ANATOMY AND PHYSIOLOGY.—H. Augustus Edmonds, G. J. Padbury, and F. W. A. Bryden, Guy's; John Hill, W. Francis Read, J. Aloysius Feeny, C. Harvey Lewis, Sampson Low, J. E. A. G. Becker, and A. John Cromwell, St. Bartholomew's; Edwin Cooke, Reginald T. H. Bodilly, Evan J. Neville, and Absolom George, King's College; Ernest H. Crisp, St. Thomas's; A. Clifford Domford, London Hospital; G. H. Biden and E. Irving Day, Charing-cross; E. Llewellyn Williams, University College; William Challenor, Middlesex.

ANATOMY ONLY.—George C. Peachey, M. E. H. Wale, and G. W. B. Daniell, St. George's; Frank Gilpin and Arthur F. Tyrrell, Middlesex; James Bampfylde, Guy's; William Jones, University College.

PHYSIOLOGY ONLY.—Astley C. Roberts, Guy's; John Bate, London Hospital.

(Candidates referred for three months, 5; six months, 2.)

Passed on the 15th inst.:—

ANATOMY AND PHYSIOLOGY.—John Nixon and W. Gratwicke Heasman, St. Bartholomew's; Timothy J. Head, George W. Sequeira, Benjamin H. B. M'Crea, and A. G. Bateman Lory, London Hospital; Llewellyn Harris-Liston, P. Dansey Addis, and A. Pedro de Carvalho, University College; Robley H. J. Browne, Guy's; Benjamin Badcock, Charing-cross and Sheffield.

ANATOMY ONLY.—George Pender-Smith, Guy's; Frank Elias, University College; Lawrence Franklin, St. George's; T. Warne Sargent, London Hospital; Cecil R. Harper and J. D. Cree, Middlesex.

PHYSIOLOGY ONLY.—R. Wright and G. Gavin Morrice, St. Bartholomew's; J. Perceval Westrup, King's College; R. Conrad Fraser, Guy's; David C. Dunstan, London Hospital; Alfred Purvis, Charing-cross.

(Candidates referred for three months, 10; six months, 2.)

Passed on the 16th inst.:—

ANATOMY AND PHYSIOLOGY.—C. Ernest Thomas and Harry Baldwin, Middlesex; Henry J. Marston and Frederick H. Bence, London Hospital; G. Sidney Green, St. Bartholomew's; Arthur Shillitoe, C. Herbert Sharp, T. A. Burnard Cooke, and John W. Roberts, Guy's; Hubert C. Phillips, St. Mary's; Frederick W. Davidson, Frank W. Croft, and Edward O. Cox, Westminster; Ibar MacCarthy, St. George's; T. A. Barrett Plowman, C. Mortimer Lewis, and Philip H. Whiston, St. Thomas's; H. Havilland Roe and William Case, King's College; Henry F. Cleveland and George H. Jauffret, University College; Sampson G. V. Harris, Charing-cross.

ANATOMY ONLY.—G. Irvine MacMunn, Westminster; Edgar Gregson, St. Bartholomew's; George H. Metcalfe and George A. Slack, Guy's; Frederick C. Angear, Charing-cross.

PHYSIOLOGY ONLY.—Alfred R. Nicholls, Middlesex.

(Candidates referred for three months, 9; six months, 2.)

The following candidates passed the Second Examination under the Combined Examining Board for England on the 8th, 9th, and 15th inst.:—

George Belben Flux, Herbert Shipton, Charles Henry Pillitser, } King's College.

(One candidate was referred for three months.)

The Library of the College will be closed on Monday, the 26th, and Tuesday, the 27th inst., at four o'clock, for the purposes of the Pass Examination for the diploma of Member.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on the 15th inst.:—

Crosbyy, Robert, Newcastle-on-Tyne College of Medicine.
Dimmock, Augustus Frederick, King's College.
Falles, Frederick George, St. Bartholomew's Hospital.
Glinn, Cornelius Frederic, St. George's Hospital.
Hutton, John Stuart, St. Thomas's Hospital.
Vernon, John James Dean, Guy's Hospital.

The following gentleman also on the same day passed the Primary Professional Examination:—

Alexander James Adie, Charing-cross Hospital.

The following candidates passed the Preliminary Examination in Arts on the 8th, 9th, and 10th inst.:—

SECOND DIVISION.

*Balding, Edmund.	Norton, Everitt Edward.
Bale, Rosa Elizabeth.	*Nourse, Stuart C.M.
Bowd, John William.	O'Sullivan, Carroll.
Dalby, Herbert Ernest.	Raynes, Sidney Herbert.
Daly, Charles William.	Roper, Arthur Leonard.
Green, Arthur Robert.	Smith, Alfred.
Hawke, Edward D. H.	*Smith, Stanley John.
Heywood, Tomás.	Spilsbury, Francis Handa.
Ireland-Smith, Normand.	*Walter, Richard A.
Jackson, John.	*Watson, Luther.
*James, John Morris.	Webb, Frank.
*Jobbins, Edwin.	*Williams, John Bayley.
Knight, Brodnax.	Wilmot, Hugh Beghie.
Litchfield, Ernest R.	*Witham, Ernest Wells.

* Passed also in Elementary Mechanics.

Passed in Elementary Mechanics alone:—

Newington, John. | Wood, Thomas Jason.

Passed in Greek alone:—

Wright, Richard Searle.

DR. J. RANDLE BUCK of Sidbury, Worcester, has been elected a member of the examining staff of the St. John Ambulance Association.

THOMAS HAYES, M.R.C.S., of Rathkeale House, has been placed on the Commission of the Peace for the County Limerick.

MR. J. C. CLARKE, M.P. for Abingdon, has offered to build, at his own expense, a cottage hospital for the borough, at a cost of about £1000.

Two of the daughters of the King and Queen of Sweden have, it is stated, been dangerously ill from the effects of poisonous wall-papers.

A MEETING of workmen's representatives for the purpose of extending the Hospital Saturday movement among the working classes was held in Liverpool on the 19th inst.

WE regret to hear that Mr. Robert De'Ath, coroner for the borough of Buckingham and Winslow district, has recently met with an accident by being thrown out of his gig.

A SCHEME for the establishment of a Foundling Hospital for Liverpool has received a considerable amount of support, and an appeal for subscriptions and donations has been issued.

MR. CHARLES W. GLASSINGTON, M.R.C.S. and L.D.S. Ed., has been elected President of the Students' Society of the National Dental Hospital, in place of Mr. H. G. Read, L.D.S. Eng., who has resigned.

THE plans for the new chemical laboratory at Cambridge have been approved by the syndicate. The building will accommodate 175 students working at one time, and the total cost of the building and fittings is estimated at £30,700.

PRESENTATION.—On Monday, Jan. 12th, at Newton Heath, the Committee of Dawson-street Dispensary, Manchester, presented Dr. C. McDonnell with a gold watch on the occasion of his transfer to Newton Heath, after being junior medical officer of the dispensary for two years.

SIR P. DUN'S HOSPITAL, DUBLIN.—An arrangement has been made by the provost and senior Fellows of Trinity College to pay an annual sum of £50 as a subscription to this hospital, on the condition that students of the College suffering from fever shall be admitted to the pay wards without charge.

A CONCERT was given in the Sheldonian Theatre at Oxford on Tuesday last, in aid of the funds required to complete the purchase of the Nurses' Home in Oxford, which has been established in memory of the wife of Sir Henry Acland, the Regius Professor of Medicine. Princess Christian took part in two pianoforte duets.

CANTOR LECTURES.—Dr. Poore's third and final lecture, to be given at the Society of Arts on Monday, the 26th inst., at 8 P.M., will be on "Soil as a Climatic Factor: the Peculiarities of Mountain Climates, the Application of Modern Views to some Old Facts, and the Practical Use to be made of them in lessening some of the Dangers of Tropical Climates."

THE Council of the Charity Organisation Society, at a recent meeting, considered the subject of supplying dinners to poor children in the public schools on a self-supporting basis. The opinion was expressed that free dinners should not be entirely discontinued, but the consideration of the subject was adjourned before a definite resolution was arrived at.

DUBLIN HOSPITAL SUNDAY FUND.—The total collections for 1884 produced a sum amounting to £4399 0*s.* 11*d.*, which includes not only the collections taken up in the various churches, but also special donations, and the proceeds of a football match, the latter contributing a sum of £54 14*s.* to the fund. As compared with the previous year an increase is shown of £186 4*s.* 5*d.*

FIRE AT AN AMERICAN ASYLUM.—On the 18th inst. the infirmary of the Illinois Hospital for the Insane at Khankakee caught fire, the flames originating in the furnace room. The weather was cold, the thermometer registering 12° below zero. The building was totally destroyed. Of the forty-five patients in the wards at the time seventeen were burnt to death, the remainder being with difficulty rescued.

ACADEMY OF MEDICINE IN IRELAND.—At a special general meeting of the Academy, held on the 17th inst., the following members were elected Honorary Fellows: Sir James Paget, Theodor Billroth, Prof. Virchow, Prof. Pasteur, Prof. Charcot, Dr. Austin Flint, Dr. Keith, Prof. Schroeder, Prof. Kölliker, and Sir Joseph Lister. At the same meeting the salary of the general secretary was fixed at £100 a year.

THE METROPOLITAN FREE HOSPITAL.—Building operations have been commenced upon the site which has been purchased by the committee of this institution in De Beauvoir Town, Kingsland, and which covers an area of 66,000 feet. The out-patients' department will, it is expected, be complete and ready for use by the end of March, while the whole building is to be finished by the end of the present year.

ANOTHER SCOTCH PROSECUTION UNDER THE DENTISTS ACT.—The same person who was convicted before the Sheriff of Edinburgh a short time ago, and fined £5 for falsely calling himself a dentist without being registered or qualified, has again been prosecuted and fined £20 for the same offence. It transpired during the trial that a separate fine may be claimed for each offence against the Act, and each repetition of an advertisement which is a false declaration is an offence.

MANCHESTER MEDICAL SOCIETY.—The following is the list of office bearers elected for 1885:—President: Mr. Walter Whitehead. Vice-Presidents: John Augustus Ball, M.B.; Charles Edward Glascott, M.D.; James Hardie, M.D.; Herbert Smith Renshaw, M.D. Treasurer: David Little, M.D. Secretary: Frederick Armitage Southam, M.B. Other Members of Committee: Charles James Cullingworth, M.D.; Julius Dreschfeld, M.D.; Abraham Matthewson Edge, M.D.; Richard Dacre Fox; Thomas Jones, M.B.; Siegmund Moritz, M.D.; James Ross, M.D.; Thomas Starkey Smith, M.B.; Arthur Edwin Sutcliffe; George Thomson, M.D.; Morrison Watson, M.D., F.R.S.; William Yeats, M.D.

BRITISH MEDICAL BENEVOLENT FUND.—The annual general meeting of subscribers to this Fund was held on Jan. 15th, at the house of the treasurer, Dr. Broadbent, when Dr. G. C. Jonson, chairman of committee, occupied the chair, in the unavoidable absence of the President, Sir George Burrows. From the annual report of the committee for the past year it appeared that the donations during 1884 have amounted to £722 18*s.* 6*d.*, subscriptions to £1307 3*s.* 9*d.*, a total of £2030 2*s.* 3*d.*, the increase in the amount of subscriptions being a noticeable and gratifying fact. The disbursements during the year had been—in grants, £1892 10*s.*; in annuities, £1107 10*s.*; in all, £3000; and the entire expense of collecting and distributing this large sum, over £3000, has been £152, about 3 per cent. The number of cases relieved during 1884 in the grant department was 168; and the committee felt that the amounts given by them to really needy and deserving applicants were, from want of funds, sadly less than the merits of the cases deserve. Seven fresh annuitants were elected; but there remain upon the list of eligible candidates no less than thirty-eight persons, all over sixty years of age, not one enjoying an income of £10, and mostly past work and practically penniless. Mr. Thomas Smith joined the committee; and Mr. France and Professor Macleod of Glasgow were elected vice-presidents.

WALLASEY MEDICAL CHARITIES.—On the 15th inst. a meeting of the subscribers and friends of the Wallasey Cottage Hospital, the Wallasey Dispensary, and the Seacombe Cottage Hospital was held to consider the best method of increasing hospital accommodation in the parish. Approval was, after a lengthy discussion, expressed of the scheme for building a new and larger cottage hospital at Wallasey, and also of the proposal to add to the cottage hospital at Seacombe, and to improve the arrangements at the dispensary.

EDINBURGH ROYAL INFIRMARY.—A meeting of the contributors to this institution was held on the 19th inst. for the purpose of receiving the report by a committee of the subscribers on the annual statement by the managers. The report, which was unanimously adopted, expressed satisfaction at the continued and increasing efficiency of the hospital during the past year, and urged the settlement of the question of providing special accommodation for fever patients by the Town Council, under the Public Health Act.

KING'S COLLEGE.—On the 21st inst. the twenty-fifth annual dinner of the past and present students of this institution was held in the College dining hall. In the unavoidable absence of the Lord Chancellor, Archdeacon Farrar presided, and among others present were General Sir Richard Wilbraham, K.C.B., General Sir J. A. Lefroy, K.C.M.G., Archdeacon Watkins, Dr. Priestley, Mr. T. M. Goodeve, Mr. Edward Clarke, Q.C., M.P., Professor Leone Levi, and a large number of associates and students of every department of the College.

NORTH-WESTERN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—At a meeting of this Society on the 8th instant, Dr. Hope, assistant medical officer of health for Liverpool, read a paper on Infantile Diarrhœa, in which he gave it as his opinion that the disease was due in the majority of cases rather to the absence of cleanly habits among the poor than to seasonal influences. He concluded by suggesting that a society which exists at Liverpool for the prevention of cruelty to children should supplement the labours of another institution in Liverpool which secures the attention of a midwife for poor women confined at their own homes, by introducing an efficient staff of trained nurses, whose duty it should be to visit periodically the young infants from the time the services of the midwife were discontinued. The paper was followed by a discussion, in which several members of the Association took part.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.—The following members were elected as officers and councillors for the year 1885 on the 12th inst.:—President: Mr. C. Spence Bate, F.R.S. (Plymouth). Vice-Presidents: Messrs. T. Charters White, George Gregson, Henry Sewill, J. T. Browne-Mason (Exeter), Richard White (Norwich), Andrew Wilson (Edinburgh). Treasurer: Mr. James Parkinson. Librarian: Mr. Felix Weiss. Curator: Mr. S. J. Hutchinson. Editor of the Transactions: Mr. J. Oakley Coles. Hon. Secretaries: Messrs. David Hepburn (Council), Robert Woodhouse (Society), Storer Bennett. Councillors: Messrs. F. Canton, Alex. Cartwright, Chas. S. Tomes, Wm. St. George Elliott, Augustus Winterbottom, Samuel Cartwright, A. Morton Smale, J. Howard Mummery, Arthur S. Underwood, J. F. Cole (Ipswich), G. C. McAdam (Hereford), W. E. Harding (Shrewsbury), Robert Reid (Edinburgh), J. R. Brownlie (Glasgow), J. H. Whatford (Eastbourne).

VICTORIA UNIVERSITY.—At a meeting of the Court of the University on Wednesday certain additions were made to the regulations affecting the time of admission of matriculated students to the Preliminary Examination in Science and to the First and Second M.B. respectively.

OXFORD UNIVERSITY.—The next examination for a vacant Radcliffe Travelling Fellowship will commence in the University Museum on Monday, February 9th, at 10 A.M. Candidates are requested to send in their names to the "Radcliffe Examiners, Radcliffe Library, Museum," on or before the last day of January.

THE CONTAGIOUS DISEASES ACT IN QUEENSLAND.—On November 21st the Queensland Legislative Assembly, after an animated debate, by the casting vote of the Speaker declared its disapproval of the compulsory examination of women under the Contagious Diseases Act. At a meeting of the Assembly, however, on Nov. 25th, a grant of money for the purpose of carrying the Act into effect was passed, the Colonial Secretary stating that he did not consider that the resolution which was carried on the casting vote of the Speaker should be regarded as an instruction to the Government to discontinue the operation of the Act.

PROPOSED NEW HOSPITAL AT HARROGATE. — The committee of the proposed new Bath Hospital have taken in hand a project for the erection of a new building, in place of the present dilapidated and badly constructed hospital, for the reception of 100 patients, estimated at a cost of £15,000, towards which amount certain sums have been already promised. The governors will be asked at the annual meeting to empower the committee to carry the project into effect, but no building will be commenced until about £10,000 has been promised. The sum is certainly a large one, but it is not too much for such a famous health resort as Harrogate, which has risen so immensely in public favour within the last few years.

MANCHESTER MEDICAL SOCIETY.—At the recently held annual meeting of this Society it was stated that the number of members now on the roll is 240, being ten more than last year. The library has been increased during the year by 302 volumes, and it now contains 28,118 volumes besides a number of unbound pamphlets. The statement of the treasurer (Dr. Little) showed that the income of the Society—including a balance at the commencement of the year of £144, members' subscriptions, £350, and a contribution from Owens College of £100—amounted to £629. The expenditure showed that £118 had been paid to the trustees, and that, after all necessary expenses had been defrayed, there remained a balance in hand of £139. After the adoption of the report, certain alterations of the rules were agreed to, and Mr. Walter Whitehead was chosen president for the ensuing year.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

ANDERSON, JOSEPH, M.B., C.M.Aber., has been appointed Junior House-Surgeon to the Preston and County of Lancaster Royal Infirmary, Preston, vice F. D. Irvin, M.B.Lond., M.R.C.S., resigned.

CURTIS, ALBERT, M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer of Health for the Staines Urban Sanitary District.

DIGHTON, A. ADAIR, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Resident Surgeon at the Branch Dispensary, Cheltenham.

FISHER, T. CARSON, A.B., M.D. Trin. Coll. Dub., has been appointed Consulting Physician to the Miller Memorial Hospital, Greenwich.

GENGE, RICHARD E., M.R.C.S., L.R.C.P., L.M., has been appointed Resident Obstetric Assistant to the Westminster Hospital.

HEATH, CHARLES J., M.R.C.S., L.S.A.Lond., has been appointed Senior House-Surgeon to the Preston and County of Lancaster Royal Infirmary, Preston, vice G. M. King, L.R.C.P.Ed., L.R.C.S.I., resigned.

JAGO, CHARLES SPRAGUE, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Somersham District of St. Ives Union, vice Grove.

LEIGH, WILLIAM WATKIN, L.R.C.P.Ed., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer and Public Vaccinator for the Gellyger Lower District of the Merthyr Tydfil Union, vice J. Leigh, deceased.

MCMURRAY, WAHAT, M.D., C.M. Q.U.I., has been appointed Medical Officer to the Walgett Hospital, New South Wales.

MATHESON, H. A. RIGBY, L.R.C.P.Ed., L.F.P.S.Glas., has been appointed House-Surgeon to the Launceston General Hospital, Tasmania, vice Thompson, resigned.

ORWIN, A. W., M.D., has been appointed Physician to the Guildhall School of Music.

POLLARD, FREDERICK, M.D.Lond., has been appointed Medical Officer and Public Vaccinator for the Chulmleigh District of the South Molton Union, vice T. Daly, resigned.

PRINGLE, J. J., M.B.Edin., M.R.C.P., has been appointed Assistant-Physician to the Middlesex Hospital.

SWAIN, JAMES, M.R.C.S., has been appointed Senior House-Physician to the Westminster Hospital.

WALFORD, WALTER G., M.R.C.S., L.R.C.P.Lond., M.D. Dur., has been appointed Surgeon to the St. John's-wood and Portland-town Provident Dispensary.

WEAVER, W. G., M.R.C.S., L.S.A.Lond., has been appointed House-Surgeon to the Westminster Hospital.

WILDE, R. P., L.R.C.P.Ed., has been appointed Assistant House-Surgeon to the North Dispensary, Liverpool.

WILLS, W. A., M.R.C.S., has been appointed Junior House-Physician to the Westminster Hospital.

YOUNG, Mr. W. C., has been reappointed Public Analyst for the Whitechapel Board of Works District.

Births, Marriages, and Deaths.

BIRTHS.

CAMERON.—On the 18th inst., at "Lochiel," Harlesden, N.W., the wife of Charles H. H. Cameron, L.R.C.P.Lond., M.R.C.S.Eng., of a son.

COLMER.—On the 6th inst., at South-street House, Yeovil, the wife of P. S. H. Colmer, M.D., of a son (stillborn).

ROBERTSON.—On the 19th inst., at the Grand Avenue Mansions, West Brighton, the wife of Dr. Lockhart Robertson, F.R.C.P., of a son.

MARRIAGES.

CHAVASSE—HYLAND.—On the 22nd inst., at St. Saviour's Church, Camberwell, by the Rev. F. J. Chavasse, M.A., Rector of St. Peter-le-Bailey, Oxford, the Rev. L. T. Chavasse, M.A., Vicar of the Parish (brothers of the bridegroom), and the Rev. Percival E. Wilson, M.A., All Saints' Rectory, Birmingham, Thomas Frederick Chavasse, M.D., of Birmingham, and Barnet-green, Worcestershire, to Frances Hannah, only daughter of the late Arthur Hyland, Esq., J.P., of The Linthurst-hill, near Bromsgrove.

GILL—SARGENT.—On the 14th inst., at St. John's, Brixton, by the Rev. J. B. Patrick, Fitz-Henry Gill, of Tavistock, to Caroline Pearce, only daughter of D. W. Sargent, M.R.C.S., L.S.A.Lond., 364, Brixton-road. No cards.

IRVINE—HUGGINS.—On the 15th inst., at St. Thomas's Church, Portman square, by the Rev. F. Alexander Ormsby, M.A., Robert James Irvine, M.S., M.B., only son of Robert Irvine, Deputy Inspector-General R.N., to Helena Jane, widow of the late Wm. Farquhar Huggins, of Limpsfield.

ROSSER—CRICKMAY.—On the 15th inst., at St. Jude's Church, South Kensington, by the Rev. R. W. Forrest, D.D., Vicar, Walter Rosser, M.D., of Wellesley Villas, Croydon, to Edith Maud, youngest daughter of George R. Crickmay, F.R.I.B.A., 62, Nevern-square, South Kensington.

WILKINSON—BOND.—On the 13th Nov., at St. Mary's, Preston, Melbourne, William Cleland Wilkinson, B.A., M.B., B.Ch. T.C.D., eldest son of William Wilkinson, Beresford-road, Birkenhead, to Louisa Anne, only daughter of R. M. Bond, of Preston, Melbourne, formerly of Benambra, New South Wales.

DEATHS.

CAMERON.—On the 38th inst., at 314, Kennington-park-road, S.E., of phthisis, John Cameron, L.R.C.P., aged 32.

DAVIES.—On the 15th inst., at Plymouth, Elijah Knox Davies, M.R.C.S.E., late District Surgeon of Hanover, South Africa, aged 36.

HALL.—On the 14th inst., at Hampden-street, Nottingham, Charlotte, widow of the late Marshall Hall, M.D., F.R.S., aged 83.

MCCOSH.—On the 16th inst., at Bury-street, St. James's, John McCosh, M.D., late Bengal Army, aged 80.

MOORE.—On the 6th ult., at North-terrace, Adelaide, South Australia, Robert Waters Moore, M.R.C.S., F.R.S., President af the Medical Board of South Australia, and formerly Colonial Surgeon of the Province, aged 65.

NOBLE.—On the 12th inst., at his residence, Oxford-road, Manchester, Daniel Noble, M.D., aged 75.

PLAYNE.—On the 15th inst., at his residence, New Malden, Surrey, George Playne, M.D., aged 82.

PUCKLE.—On the 14th inst., George Puckle, M.D., formerly of Denmark-hill, eldest son of the late George Puckle, Esq., of De Crespigny Park, Surrey, aged 53.

RANDALL.—On the 15th inst., at Lansdowne-road, Croydon, Alfred Mayor Randall, M.R.C.S., L.S.A.Lond., in his 83th year.

TUCKER.—On the 13th inst., at Bournemouth, St. George Wade Tucker, M.D., of H.M.'s Indian Medical Service, aged 65.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

BOOKS ETC. RECEIVED.

BAILLIÈRE, TINDALL, & COX, London.

How to Prolong Life. By Chas. W. De Lacy Evans. M.R.C.S. Second Edition. pp. 190.

BELL & BRADFUTE, Edinburgh.

An Introduction to the Study of the Diseases of the Nervous System. By T. Grainger Stewart, M.D. pp. 257, Illustrated.

CARSWELL & Co., Toronto and Edinburgh.

The Law and Medical Men. By R. V. Rogers, jun., Barrister-at-Law. pp. 214.

CASSELL & Co., London.

The Year-book of Treatment for 1884. A Critical Review for Practitioners of Medicine and Surgery. By various Contributors. pp. 316.

CHURCHILL, J. & A., London.

The Student's Guide to the Diseases of Children. By J. F. Goodhart, M.D., F.R.C.P. pp. 648.

Practical Anatomy: a Manual of Dissections. By Christopher Heath, F.R.C.S. Sixth Edition, Revised by R. J. Godlee, M.S.Lond., F.R.C.S. pp. 567, with 24 Coloured Plates and 274 Wood Engravings.

CLOWES, W., & SONS.

Health Exhibition Literature. Conference on Education, Vols. XIII., XIV., XV., and XVI. Sections A to D.

COLLINS, Philadelphia.

Transactions of the Medical Society of the State of Pennsylvania. Vol. XVI. pp. 622.

CROSBY, LOCKWOOD, & Co., London.

London and Provincial Water-supplies. By A. Silverthorne, Assoc. M. Inst. C.E. pp. 142.

FISCHER, G., Jena.

Beiträge zur Pathologischen Anatomie und Physiologie. Herausgegeben von Dr. Ernst Zeigler in Verbendung mit Dr. C. Nauwerck. Erstes Heft. S. 174.

HOUGHTON, MIFLIN, & Co., Boston.

In War Time. By S. Weir Mitchell, M.D. pp. 423.

HOULSTON & SONS, London.

What to do with our Girls; or, Employments for Women. By A. T. Vanderbilt. pp. 176.

LONGMANS, GREEN, & Co., London.

A Dictionary of Medicine. By various Writers. Edited by Richard Quain, M.D., F.R.S. New Issue, in Six Monthly Divisions. Division I. pp. 304.

MACMILLAN & Co., London.

The International Encyclopædia of Surgery. Edited by John Ashhurst, jun., M.D. In 6 vols. Vol. V. pp. 1207, Illustrated with Chromo-lithographs and Woodcuts.

ROKKER, H. W., Springfield, Illinois.

Official Register of Physicians and Midwives Practising in Illinois. pp. 324.

SIMPKIN, MARSHALL, & Co., London.

Crown, Bar, and Bridge-work: New Methods of Permanently Adjusting Artificial Teeth Without Plates. By Isidore E. Clifford and R. E. Clifford. pp. 26, Illustrated.

The School Test Types; by Priestley Smith; published by the Midland Educational Company, Birmingham and Leicester.—The Sunday at Home, Leisure Hour, Boy's Own Paper, Girl's Own Paper, for January, 1885.—The Sanitary and London Medical Records Diary, 1885,—Das Sauerstoff-Bedürfniss des Organismus; von Prof. Dr. P. Ehrlich. (Herschwald, Berlin.)—Index Medicus, Vol. VI., No. 11.—Memoria sulla Cura dell' Ectropio Infiammatorio; Memoria sull' Estrazione Lineare Inferiore; pel Dott. R. Castorani.—State Measures for the direct Prevention of Poverty, War, and Pestilence; by a Doctor of Medicine. (Truelove.)—Studies from the Biological Laboratory of the Johns Hopkins University, Vol. III., No. 2. (Murray, Baltimore.)—Sul Trapiantamento dei Muscolo; pel Dr. E. Salvia.—On Alcohol in Asylums chiefly as a Beverage; The Insane in Canada; by Dr. D. Hack Tuke. (Wolff, Lewes.)—On Nitrification; by Robt. Warington.—The Care of Infants; by Sophia Jex-Blake, M.D.—The Siege of London.—Conspectus of the Medical Colleges of America; compiled by the Illinois State Board of Health.—The Life Almanack and Diary published by the Briton Life Association, 1885.—Tenth Annual Edition of the Classified Directory to the Metropolitan Charities for 1885; by W. F. Howe. (Longmans.)—New Illustrated Catalogue of Memorial Brasses &c.; issued by Thos. Pratt and Sons, Covent-Garden.—Index Medicus, Vol. VI., No. 12.—Eighth International Medical Congress; by Dr. D. Bryson Delawarr. (New York.)—Milk as a Manufactured Article; by F. T. Bond, M.D.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, January 22nd, 1885.

Date.	Barometer reduced to Sea Level and 32, F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Jan. 16	30·03	E.	37	35	...	40	35	·05	Overcast
,, 17	29·98	S.E.	37	36	...	39	34	·04	Overcast
,, 18	30·11	E.	38	37	...	39	34	...	Overcast
,, 19	30·27	E.	38	36	...	39	36	...	Overcast
,, 20	30·09	E.	34	33	...	37	33	...	Foggy
,, 21	29·97	E.	28	...	...	33	26	...	Overcast
,, 22	30·01	S.E.	31	...	...	34	25	...	Overcast

Medical Diary for the ensuing Week.

Monday, January 26.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M. each day, and at the same hour.

ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—7.30 P.M. Discussion (continued): Are Small-pox Hospitals necessarily (*per se*) a Source of Danger to the Surrounding Population?

SOCIETY FOR THE ENCOURAGEMENT OF ARTS, MANUFACTURES, AND COMMERCE.—8 P.M. Dr. G. V. Poore: The Chief Sources of Atmospheric Impurities, both Inorganic and Organic; Climatic Diseases and Climatic Health Resorts (Cantor Lecture).

MEDICAL SOCIETY OF LONDON.—Mr. Bowreman Jessett: Cancer of the Tongue; its Etiology, and an Inquiry into the Different Methods adopted for its Removal.—Mr. William Rose: A Case of Simple Depressed Fracture of the Skull; Trephining; Recovery.—Dr. Beevor will show a Case of Paralysis Agitans without Shaking.

Tuesday, January 27.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M., and on Fridays at 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ROYAL INSTITUTION.—3 P.M. Prof. Moseley: Colonial Animals.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—Mr. W. B. Dalby: Cases in which Perforation of the Mastoid Cells is necessary.—Mr. Barwell: Case of Simultaneous Distal Ligature of the Carotid and Subclavian Arteries for High Innominate Aneurysm.

Wednesday, January 28.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays at 1.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Skin Department: 9.30 A.M., on Tuesdays and Fridays.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M., and on Saturday at the same hour.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour. Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

HUNTERIAN SOCIETY.—7.15 P.M. Council.—8 P.M. Dr. Robert J. Lee: The Clinical Study of Infantile Syphilis.

Thursday, January 29.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Surgical Consultations, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ROYAL INSTITUTION.—3 P.M. Prof. Dewar: The New Chemistry.

THE PARKES MUSEUM OF HYGIENE.—8 P.M. Mr. James Cantlie: Degeneration amongst Londoners.

Friday, January 30.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1.30 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—9 P.M. Prof. Pauer: Works of Living Composers for the Pianoforte.

Saturday, January 31.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Dr. Waldstein: Greek Sculpture.

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

MEDICAL PRACTITIONERS AND REGISTRARS.

P. F. M.—The conduct of the Registrar, as reported in our correspondent's letter, displays an ignorance of his official instructions which is the more incomprehensible since he has held his appointment for twenty-five years. Each form for medical certificate of the cause of death bears on its face the words "Should the medical attendant not feel justified in taking upon himself the responsibility of certifying the fact of death, he may here insert the words 'as I am informed.'" It seems almost incredible that a registrar of twenty-five years' standing should be ignorant of this instruction, more especially as registrars are strictly enjoined to ascertain all the facts relating to a deceased person (including the date of death), except the cause of death, from the legal "informant," who is alone responsible for the accuracy of such information, and who signs the entry in the death register. We urge our correspondent, in the interest alike of the public, the profession, and the Registrar-General, to report the circumstances fully and precisely to that official, at the General Register Office, Somerset House.

PRURITUS VULVÆ.

M.D. asks for suggestions as to the best treatment of pruritus vulvæ, as he has a very obstinate case, which has hitherto resisted the usual local applications—nitrate of silver, soothing lotions, &c.

Vista.—No.

CAFFEINE.

To the Editor of THE LANCET.

SIR,—I shall be glad if you can find space for a few lines to draw attention to this valuable heart-tonic, which, though known and favourably spoken of by Continental physicians for twenty years, seems to have been comparatively little used in this country until very recently. My attention has been drawn to its use by the report of a clinical lecture by Dr. Dujardin-Beaumetz, Physician to the Hôpital Cochin, Paris, in which after summarising the various opinions which have been given as to its value and mode of action, he promises the students that they will have the opportunity of seeing "veritable resurrections effected in our service by this marvellous therapeutic agent," and recommends that large doses, even amounting to as much as two grammes (or half a drachm) a day, should be given in order to obtain the full benefit from its use.

Having at the time three cases under my care in which cardiac debility was a very marked symptom, in two of the cases as the result of a recent attack of rheumatic fever, in the third as the result of a long residence in India with continual ill-health while there, I determined to try caffeine, and have been much pleased with the result. In all three cases the improvement has been most marked, the heart's action being steadied and strengthened, and the vascular tension augmented. In one case a decided diuretic action was noted, and the only ill effect in any case was that on one occasion, a two-grain dose being taken as late as 8 P.M., the patient was kept awake till 3 A.M., apparently by the action of the medicine. I have not found it necessary to give larger doses than two grains three or four times a day, dissolved in water and flavoured with tincture of orange or gentian.—Your obedient servant,

Dulwich, Jan. 15th, 1885. H. NELSON HARDY.

J. H. Davies, M.B.—We apprehend that the certificate of such a midwife would be quite sufficient.

Mr. C. E. Steele (Liverpool).—The matter has, we think, been sufficiently discussed.

BRITISH MEDICAL BENEVOLENT FUND.

To the Editor of THE LANCET.

SIR,—I have great pleasure in informing you that a vote of thanks for the services you have rendered to the Fund was unanimously passed at the annual meeting of the subscribers, held yesterday.

I am, Sir, yours faithfully,

Clifton-gardens, W., Jan. 16th, 1885. EDWARD EAST, Hon. Sec.

PROMOTION IN THE INDIAN MEDICAL SERVICE.

Observer, writing from India on the above subject, says:—

"Great injustice has been done by the system of allowing the local governments of the different provinces to nominate their own surgeon-generals. These appointments are not mere local or provincial posts, but form part of the administrative appointments retained for the Indian Medical Service at the reorganisation in 1880. They carry with them the military rank, as well as pension, of deputy surgeon-general, and ought therefore to belong to the whole service, and not to any local section of it. But this is not the only power of interfering with promotion exercised by the local governments, for they are also allowed to select their own sanitary commissioners. Now, these, on attaining twenty-six years' service, are at once raised to the rank of deputy surgeon-general, and in this way the sanitary commissioners of the North-West Provinces, the Punjaub, and Bengal have lately, one after another, superseded all their seniors. There are only twelve appointments in the service which carry with them the military rank, pay, and pension of deputy surgeon-general, and half of these are practically in the gift of the local governments. Failure to obtain these appointments means to the men passed over not only a stigma on their reputation and a loss of rank and pay, but likewise earlier compulsory retirement, and a loss for the rest of their lives of the extra pension of £250 a year. Is it wonderful that under such circumstances deep discontentment should prevail in the service, especially among the senior men, when it is seen that however faithfully men may have served the Government for the best part of their lives, and however distinguished their war services may have been, their just claims to promotion may be put aside and over-ridden by the power thus placed in the hands of the local governments?"

Dr. Walter Sumpter.—Thanks; but the lines are unsuitable for our columns.

SPURIOUS VACCINATION.

To the Editor of THE LANCET.

SIR,—At a time when small-pox prevails to a considerable extent, it may not be inopportune to consider one possible cause, among the many, why vaccination does not afford us even greater protection than is actually the case. It seems agreed by those who have had the greatest practical experience of the subject, that spurious vaccination gives little or no protection against subsequent attacks of small-pox. Now, in any given case where vaccination has been performed, either the vaccination may not "take" at all, or active local results may be obtained, and these again may be either normal or spurious. In ordinary cases, so long as sufficiently active local manifestations have been secured, the operator is satisfied the vaccination has "taken," and there is an end of the matter. The utmost attainable protection against small-pox is supposed to have been obtained. But, in fact, whether this is so or not depends entirely on the character of the local phenomena. Normal vaccine vesicles running the normal course indicate the utmost possible protection; but if the phenomena are those of spurious vaccination, probably no protection has been obtained at all.

The appearances by which we may recognise spurious vaccination are: 1. Papules or vesicles appear, but die away without undergoing the normal development, leaving by the eighth day a scale, or perhaps a scab. 2. Vesicles may appear, irregular in form, being pointed instead of flat and depressed, and irregular in contents, these being opaque and yellow, instead of clear and colourless. They are attended early by an areola, which is irregular in distribution and disappears before the eighth day. 3. Vesicles arise, at first to all appearance normal, but burst before the eighth day, leaving a scab or a suppurating sore. Now, in several of these cases scars will obviously result; so that at a period remote from that of the vaccination mere inspection will not be sufficient to enable us to conclude that the patient has been efficiently vaccinated. The scars observed in any particular case may have been the result of a spurious, non-protective vaccination. Therefore it is of the greatest importance to observe at the time when the local phenomena are in progress whether we have to do with a normal or a spurious vaccination, since it is then, and only then, that we can form any satisfactory opinion as to whether real protection has been secured or not; and in every case of spurious vaccination the operation should be repeated with a fresh supply of lymph at the earliest opportunity till normal phenomena are obtained.—I am, Sir, yours obediently,

Gower-street, W., January, 1885. A. H. N. LEWERS, M.B.Lond.

*** Mr. Lewers' letter contains much that is deserving attention, inasmuch as it states with truth that all vaccination is not equally protective, and that the course of development of the vaccine vesicle is an important element in relation to the amount and duration of protection. We cannot altogether agree with Mr. Lewers that the cicatrix affords no evidence of the amount of protection. The evidence obtained from small-pox hospitals proves that where the cicatrices are foveated a subsequent attack of small-pox is likely to be less severe than when foveation is not present; and this is easily understood when we consider the changes which take place in the skin during the development of the normal vesicle on the one hand, and the advanced vesicle on the other.—ED. L.

Dr. Albury.—The medical officers of the army are permitted to attend private patients so long as this does not interfere with the efficient discharge of their duties.

NEWSPAPER MEDICAL DISCUSSIONS IN BIRMINGHAM.

WE regret to see delicate questions of medical science made the subject of letters in the newspapers of Birmingham. Henceforth, when any medical man begins a controversy on strictly medical subjects in a newspaper, he should remain unnoticed and unanswered by any other medical man. The subject of unseemly discussion in Birmingham was the use of Chian turpentine in cancer. This is eminently the kind of question which has no business to be discussed in a newspaper

Messrs. Eisinger and Neuburger.—We are glad that our correspondents are so well pleased with the present demand for "Wood Wool;" but we fail to see that they have advanced anything to lead us to modify our opinion.

BARBED WIRE FENCES.

To the Editor of THE LANCET.

SIR,—I am sorry to see that an attempt is being made to introduce the use of barbed wire as a fencing into England, and sincerely hope that the press generally will follow your lead in protesting most strongly against the use of such a diabolical invention. I have sufficient confidence in the humanity of my countrymen to feel convinced that anyone who had seen as much of "the working of it" as I have, during my residence in Kansas, where it is very largely used, would upon no account allow a yard of it to be erected upon their property.

Within the past few months I have heard of numerous instances in which horses have been more or less injured by coming in contact with what you most aptly call "such a *chenaux de frise*." Three of these so-called accidents having occurred within a mile of my house, I am enabled to give the results. In the first case the horse was so badly injured that after lingering for a few weeks, doubtless in great agony, it had to be shot, because, as the owner informed me, "it got down, and we couldn't get it up again." In another case the victim was so severely gashed that when I last saw it, some six weeks subsequent to the accident, it presented a shocking appearance, and the chances seemed strongly in favour of a friendly bullet being ultimately necessary. In the third instance two men who had been engaged in tinning a neighbour's roof drove into a fence on their way home in the dark. Having a powerful pair of cutting pliers with them, they were fortunately enabled to sever the wire and set the horse free, but not until he had been considerably cut about, and had kicked the harness off, and the buggy to pieces.

The popularity of barbed wire appears to be already on the wane in this country; it most certainly is in this section, and in one State, Vermont, a law has lately been passed prohibiting the use of it.

My anxiety lest when I return to the "Old Country" I should find it defaced by such a brutal, unsportsmanlike, and therefore, I think I may safely say, un-English system of fencing must be my apology for troubling you with this letter.—I am, Sir, yours truly,

W. V. VERNON CHAPMAN.

Fairlight, Walton, Harvey County, Kansas, U.S.A., Dec. 23rd, 1884.

H. T.—This new chinolin compound has been described by Knorr of Erlangen in the article by Filehne in the Zeitsch. für Klin. Med., Band. vii., Heft. 6, 1884; Berlin. Klin. Woch., No. 20, 1884; Deutsch. Med. Woch., No. 24, 1884.

AMENORRHŒA TREATED BY PERMANGANATE OF POTASH.

To the Editor of THE LANCET.

SIR,—The following case, which recently occurred in my practice, may prove of some interest to the readers of THE LANCET, as it goes towards confirming the high opinion that Dr. Thomas Sanctuary holds of the permanganate treatment in the above disease.

I was consulted about Miss W——, aged sixteen years, in November, 1884. The history was that she menstruated for the first time in June, 1884, and again in September. At the time I saw her in November she was both nervous and rather anæmic, suffering from frontal headache and a dull pain in the lumbar region. I ordered her sulphate of iron and aloes and other tonic treatment, and an anodyne liniment, which she continued using for more than a month. Under this treatment her general health improved very much, but there was not the least sign of a return of the catamenia. Her mother being most anxious about the case, I thought it advisable to try Ringer's treatment. I procured some pearl-coated pills from Messrs. Richardson and Co., Leicester, England, a grain of permanganate of potash in each pill, made up with "kolin to prevent oxidation," one pill to be taken three times a day with meals. After nine pills had been used the catamenia returned; so that nine of these brought a result in three days that ordinary treatment failed to do in four weeks.—I am, Sir, yours faithfully,

CHARLES F. MURRAY, M.D.

Ashfield, Beau Parc, Co. Meath, Jan. 14th, 1885.

"FOUR TWIN BIRTHS IN SUCCESSION."

To the Editor of THE LANCET.

SIR,—From the register of baptisms in the parish of Lesmahagow, Lanarkshire, I am enabled to supply a second example of four twin births occurring in succession. This was in the family of James Hamilton, farmer, Southfield Farm, Lesmahagow, and Isabel Lawson, his spouse. The births, five of them twins out of a total of eight, were in order as follows:—1726, March 23rd, twins, boy and girl; 1728, Feb. 29th, girl; 1730, March 29th, boy; 1732, twins, boy and girl; 1734, Oct. 6th, twins, boy and girl; 1736, Sept. 5th, twin boys; 1739, Aug. 20th, twins, boy and girl; 1741, Oct. 31st, girl.—I am, Sir, yours truly,

Lesmahagow, N.B., Jan. 10th, 1885. J. B. DALZELL.

ANOTHER "CURIOUS MEDICAL ACTION."

OUR contemporary the *Islington Gazette* reports another case in which a patient sought to evade full payment of a medical bill by setting off the opinion of one medical man against that of another. The judge very properly declined to decide between two different medical versions of a sore throat, which, strumous in the first instance, as Mr. Berry said, might too easily, in the unhealthy state of some of the northern districts, become diphtheritic in the second, as Mr. Dunstan alleged. Judgment was given for the plaintiff, Mr. Berry.

H. D. F. will find in our current number an article setting forth our views on the subject.

"THE MEDICAL DIRECTORY FOR 1885 AND THE NORTH-WEST LONDON HOSPITAL."

To the Editor of THE LANCET.

SIR,—The letter of Mr. Craske, one of the secretaries of the North-West London Hospital, requires some little correction, which, with your permission, in my capacity as governor, I will now proceed to give.

In the first place, the statement that Sir A. Clark and Mr. Heath resigned "out of deference to the united request of the late staff" is an error. No united request was ever made to these gentlemen. This I have on the highest authority. It is true that they attended a meeting of the late staff, when the information by which (being busy men) they were rushed into rejoining was set right and discussed; and it was as the result of this meeting, "and owing to the questions discussed thereat," to use the language of Sir Andrew Clark, with which Mr. Craske must have been familiar, that these gentlemen, for the second time in the course of a few months, deemed it their duty to sever their connexion with the North-West London Hospital.

Secondly, the secretary informs the public that the resignation took place too late to admit of his communicating with the Medical Directory. Had he taken this course of his own initiation, instead of awaiting a process of extraction, his explanation would have been more satisfactory. The secretary says that I could have obtained information privately from himself, and would have best shown my goodwill towards the hospital had I done so. It is, however, because I feel strongly that hospitals should court, rather than fight shy of, publicity, even to the minutest details of their management, that I thought it my duty to communicate with your journal, as the recognised leader amongst medical publications. Mercy, for which the secretary asks, is no doubt a gentle virtue, and should be remembered especially in our private relations; yet we must not forget that in all questions between charitable institutions and the public who support them, the motto "Fiat justitia ruat coelum" is a safer guide.

I am, Sir, your obedient servant,

A GOVERNOR OF THE NORTH-WEST LONDON HOSPITAL.

Jan. 19th, 1885.

ON THE RESULT OF EXTENSION AFTER TENOTOMY.

To the Editor of THE LANCET.

SIR,—May I ask those of your readers interested in orthopædic surgery whether it is an established fact, as generally stated, that after tenotomy the extension made use of in the after-treatment actually stretches the newly-formed tendon between the cut ends, say, like a piece of india-rubber?

I have recently operated on two cases of wryneck, one being a severe case with 2½ in. shortening on the affected side. My after-treatment in these cases was at first by elastic extension with a Martin's bandage; but finding this rather irksome, I commenced manual extension, with a very good result. One thing struck me, that on forcibly extending the divided tendon a distinct "give," accompanied by a "snap," was the result. I found that the upper end of the new tendon and the lower end of the old were separated abruptly for about an eighth of an inch; the nail and part of the tip of the index finger could be inserted into this sulcus; there was evidently no new material between the old and the new tendon. After a lapse of about twenty-four hours this sulcus was filled up with inflammatory lymph ("tendon callus," if we may so term it), which projected lump-like above the level of the old tendon; this after a time smoothed down to the normal tendon level.

Does not this show that whether mechanical and slow, or manual and quick, extension is used, the newly formed tendon is not stretched, but rather that the extension used opens up a fresh area of sheath, from which the new tendon is regenerated? If this separation is great, non-union is the result, the blood-supply being unequal to the demand of tendon-formative material.—I am, Sir, yours faithfully,

T. HENDERSON POUNDS, F.R.C.S. Eng.

Snodland, Rochester, Jan. 14th, 1885.

"THE PHYSIOLOGY OF THE FEET."

To the Editor of THE LANCET.

SIR,—I have already (THE LANCET, June to August, 1884) occupied in discussing this subject too much, I fear, of your space. But I would remark on Mr. Neve's letter that he admits the advantage in descending a hill of projecting the feet, so that the toes or front part first touch the ground. This in ascending a hill is obviously necessary. It would seem to be, at least, curious if it be best also when walking on a level surface to bring the heel first to the ground, as stated of the natives of Kashmir. Accepting the fact, we are still at liberty to prefer the Arab or the North American Indian as the model for that which should be.

I am, Sir, yours truly,

Gloucester, Jan. 17th, 1885. T. S. ELLIS.

"THE YEAR-BOOK OF TREATMENT."

WE are asked to state that the first edition of "The Year-book of Treatment," a critical review for practitioners of medicine and surgery, which was published last week by Messrs. Cassell, has already been exhausted, and a second edition is now in the press.

Dr. T. Dobson.—The most recent official report on the subject is the Report of a Committee appointed by the President of the Local Government Board to inquire into the several modes of treating Town Sewage, issued as a Bluebook in 1876; the committee consisted of Mr. Clare Sewell Read and Sir Robert Rawlinson, C.E., C.B. See also Mr. Henry Robinson's small work on "Sewage Disposal," published by Messrs. E. and F. N. Spon, 46, Charing-cross, 1880.

C. O. H.—We think that the coroner should have summoned the medical man who first saw the child. Our correspondent should complain to the coroner.

HEART INJURIES.

To the Editor of THE LANCET.

SIR,—The following case may be interesting to some of your readers, in connexion with recent discussions relative to gunshot injuries of the heart.

Last September I determined, opportunity permitting, to try to solve the question as to what caused the peculiar flight and death of birds known as "towerers," notably partridges. Amongst the cases examined one was of especial interest with reference to injuries of the heart. In this case the pericardium was lacerated, and on looking at the surface of the heart some portions of feather were seen entering its substance near its base; on opening the ventricle, in addition to some feather being seen, there was a No. 6 shot plainly visible on its inner surface. This bird, after receiving the injury, continued flying as if nothing had happened for about a hundred yards, when suddenly it flew upwards in an almost vertical direction to a considerable height, then fell like a stone to the ground, and when picked up was quite dead. Now, although the time that elapsed between the injury and death of the bird was of only very short duration, still, I think, most people will admit that the injury was a very severe one, and shows that in birds prolonged muscular exertion can take place even after severe injuries to such an important organ as the heart.—Yours faithfully,

Stanley Hospital, Jan. 16th, 1885. J. F. H. OWEN, M.R.C.S., &c.

Anxious Inquirer.—The question has been answered many times in our columns. See THE LANCET for July 14th, 1883.

Dr. R. Pringle.—Next week.

ERRATA.—In the report of the remarks of Dr. Wilson Fox at the meeting of the Clinical Society last week, page 108, line 34 of the first column, the words "the late" should have been omitted. The oversight arose in substituting in the proof the name of Dr. Burney Yeo for that of Dr. Mahomed.—In the letter of "C. L." on the "English Conjoint Board," published in our last issue, fourth and fifth lines, for "next year" read *this year*.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Ernest White, Burley; Dr. Wigglesby, Ashton; Mr. Corbishley, Macclesfield; Mr. F. N. Barrett, New York; Mr. Bellamy, London; Dr. Clifford, London; Capt. Marshall Hall; Dr. W. Sumpter, Clay-next-Sea; Dr. Oswald Lane, Northampton; Mr. C. Stein, Leith; Mr. Lawson Tait, Birmingham; Dr. Jas. Niven, Manchester; Dr. Jas. Weir, Louisville; Dr. Cullimore, London; Mr. Luis Jackson, Chicago; Dr. Purcell, London; Mr. P. H. Davies, London; Mr. Berkeley Hill, London; Mr. R. W. Parker, London; Mr. Higgens, London; Mr. A. De St. Dalmas, Leicester; Mr. McArthur, Glasgow; Dr. Strahan, Berry Wood; Mr. Rushton Parker, London; Mr. Weddell, Stamford; Mr. C. E. Adams, Norwood; Mr. A. Baines, London; Dr. Watson, New York; Professor Buchanan, Glasgow; Mr. C. Steele, Liverpool; Mr. T. S. Ellis, Gloucester; Dr. Albury, Nassau; Dr. Clouston, Edinburgh; Dr. W. H. O. Sankey, Boreatton Park; Mr. P. S. Hutchinson, London; Mr. C. S. Jeaffreson, Newcastle-on-Tyne; Dr. Lucas, Brighton; Herr Julius Wolff, Darmstadt; Dr. David Donald, London; Mr. R. Woodhouse, London; Mr. Nelson Hardy, Dulwich; Mr. S. L. Wallace; Mr. R. East, London; Mr. Scratchley, London; Mr. C. W. Mortimer, Washington; Dr. Jas. Gairdner, Coldwells; Dr. Suckling, Birmingham; Mr. J. F. Owen, Liverpool; Messrs. Reynolds and Branson, Leeds; Mr. A. P. Peter, Holsworthy; Dr. Dickson, Huddersfield; Mr. Armstrong, Manchester; Mr. Boyveau, Paris; Mrs. Whitehead, Broadstairs; Mr. Davis; Messrs. Norman and Sawyer, Cheltenham; Mrs. Mitford, London; Mr. Goodman, Smeaton; Dr. Tilt, Hastings; Messrs. Smith and Son, Birmingham; Mr. Hakeman, London; Mr. Bowen, Birmingham; Mr. Ricker, St. Petersburg; Messrs. Macmillan and Co., Cambridge; Messrs. Tanner and Co., Tottenham; Messrs. Wiedemann and Co., London; Mr. Nathaniel, Ramoad, India; Messrs. Cassell and Co., London; Messrs. Wright and Co., London; Dr. Davies, London; Mr. E. Bell, London; Mr. Butt, Leicester; Mr. Fuge, Taunton; Mr. Spencer, Basford; Messrs. Fry and Son, London; Mr. Evans, Stroud; Messrs. Slinger and Son, York; Mr. Cooke, London; Mr. Sprake, Brighton; Dr. Squire, London; Mr. Giles, Vienna; Mr. Treves, London; Mr. Cox, London; Mr. Brown, Westgate-on-Sea; Mr. Crisford, London; Mr. Underwood, Little Hempstead; Mrs. Warton, Halifax; Mr. Reily, Newcastle-on-Tyne; Mr. Shirtliff, Kingston-on-Thames; Mr. Newham, London; Mrs. Letts, Spilsby; Dr. Mygind, Copenhagen; Mr. Hicks, Coventry; Mr. Millar, London; Mr. Elliott, Carlisle; Dr. Seaton, Sunbury; Mr. Barrow, Notts; Mr. Larmuth; Mrs. Pratt, Cardiff; Dr. Thomas Savage, Birmingham; Prof. McCall Anderson, Glasgow; M.D.; M.D., F.R.C.S.Edin.; M.B.; A Governor of the North-West London Hospital; Southey; Doctor, Lincoln; Surgeon, Notts; Vista; Anxious Inquirer; Sympathy; C. O'H.; Another Governor; H.W.; X.Y.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Brittain, Bridgend; Mr. Mathin, London; Mrs. James, St. John's-wood; Messrs. Mackay and Co., Edinburgh; Messrs. Maclachlan and Co., Edinburgh; Mr. Miller; Dr. Leeson, Brighton; Messrs. Read and Co., Bristol; Mr. Burnett, Motram; Mr. Chadwick, Bath; Dr. March, Rochdale; Mr. Bilney, Yoxford; Dr. Bastaple, Blackburn; Dr. Dale, Colwyn Bay; Dr. Gibbens, New South Wales; Mrs. Hey, Bournemouth; Mr. Wray, Highgate; Dr. Cameron; Mr. Hughes, Pwllheli; Dr. Colmer, Yeovil; Mr. Johnston, Orrell; Mr. Fitzgerald, Queenstown; Miss Middleton, Loughborough; Mr. Macmillan, Blackheath; Dr. Jennings, Colwell; Mr. Wilkinson, Sheffield; Dr. Greenway, West Derby; Mr. Bowes, Devizes; Mr. Davis, Brighton; Mr. Goodman, Northallerton; Mr. Anderson, Kirkwall; Dr. Andrew, Shrewsbury; Mr. Walker, Aberdeen; Messrs. Maclehose and Sons, Glasgow; Mr. Parsons, Hastings; Mr. MacDonald, Millwall; Mr. Chapman, Clapham; Mr. Donald, Streatham; Dr. Orr, Canning-town; Mr. Betts, Lincoln; Dr. McLintock; Mr. Hammett, Taunton; Miss De Luttichau, Holloway; Miss Evans, Brecon; Messrs. Loefund and Co., London; Medicus, Oldham; T., Croydon G. M., Maidstone; Medicus, Liverpool; R. S.; Dr. H., Margate; Medicus, Ludlow; Atropia; X. X. X. Edinburgh; A. B., Leeds; Matron, Bristol General Hospital; J. V., Govan; T. W. L. B., Great Yarmouth; A. B. C., Edinburgh; Malins, Macclesfield; Medicus, Guildford; Surgeon; Medicus, Bow; Medicus, Notts; Fideliter, Clacton-on-Sea; A. L.; C. J.; Medicus, Liverpool; H., Hornsey; Celsus; Scott.

Church of England Temperance Chronicle, Newcastle Weekly Chronicle, New York Daily Tribune, Queensland Parliamentary Debates, Brisbane Daily Observer, &c., have been received.

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